

The American Journal of

CLINICAL MEDICINE

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JANUARY

MCMXVIII

New Year's Greeting

THIS is the first number of our Anniversary Volume, Volume Twenty-five. Almost a quarter of a century of steady, hard work for the doctor and with the doctor. We want to make this the best volume ever—with your help; for, it is your journal; we are simply in charge.

For the new year, our greetings and best wishes. Whether it will be a happy one, we cannot presume to predict. But, at all events, let us make it a successful one; bending every effort, doing all that is in us, giving ourselves for the good of those depending upon us, for the good of our country and for the good of all the world. That is what we are fighting for.



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THE AMERICAN JOURNAL
OF
CLINICAL MEDICINE

Editorial Cabinet

DR. W. C. ABBOTT
DR. RICHARD SLEE

DR. A. S. BURDICK
DR. H. J. ACHARD

VOLUME XXV, 1918

This index has been very carefully prepared; you should make the most of it. Have your copies bound. Send us the twelve numbers, and we will return the volume to you, handsomely bound in half leather, for \$1.50—you to pay express charges both ways. The expense is small and your journal becomes, thereafter, a valuable reference library—one to which you will constantly refer in times of difficulty. A collection of well bound and well-indexed volumes of THE AMERICAN JOURNAL OF CLINICAL MEDICINE is a veritable cyclopedia of practical therapeutics, a library in itself, and worth to practitioners many times its cost.

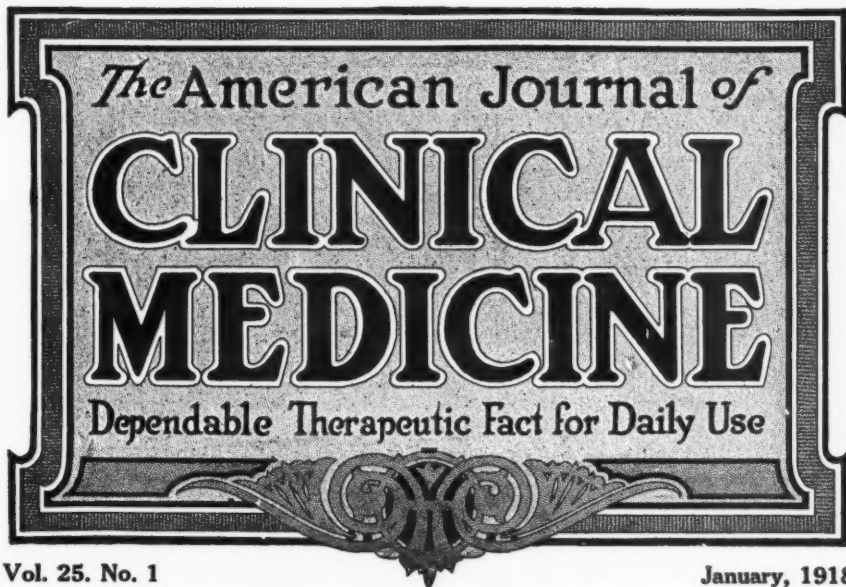
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DR. WILLIAM F. WAUGH

Whose indomitable optimism and never-failing helpfulness, breathed into the editorial pages of
CLINICAL MEDICINE, have been an inspiration to its readers for more than
twenty years. See editorial, page 2.



Vol. 25. No. 1

January, 1918

The Twenty-fifth Year of Our Work

THIS is our birthday. Twenty-five years ago this month, THE ALKALOIDAL CLINIC made its initial appearance. No earthquake occurred, in fact, we do not now recollect that any decided convulsion of nature heralded the advent of the new luminary. THE CLINIC was a modest, inconspicuous pamphlet of 16 pages, including reading matter, advertisements, and cover. There were certain distinguishing features about it, though, that separated it from the generality of medical periodicals. One of these was its abounding optimism—yet, not altogether this either, for, there was a definite reason for faith in the ability of the doctor to intervene effectively in behalf of his patient by means of remedies of definite composition and possessing positive action.

Doctor Abbott realized the worthlessness of the old *materia medica*, and he correctly defined the reasons therefor. He saw that these reasons might be summed up in one word, Uncertainty. Uncertainty as to the true point against which our attack should be directed, uncertainty as to

the nature and powers of the weapons in our hands. Take as an instance the treatment of typhoid fever employed in the Massachusetts General Hospital twenty years ago as described by Doctor Drake. It is hard to believe now that this was at the hands of a distinguished member of the faculty of Harvard Medical School. The point selected for therapeutic attack was the fever, the weapon chosen was acetanilid, in doses of from 40 to 60 grains. The crudity of both conceptions seems now to point to a period far antedating the present.

Two basic principles that formed the foundation of THE CLINIC's work were: the use of the definite, uniformly acting alkaloids, and the doctrine of fecal auto-toxemia as a factor in the vast majority of diseases. To these, we have steadily adhered for this quarter century and have seen the profession gradually approximate to our position, in regard to the latter, at least. They haven't quite gotten around to the active principles, having stopped on the way to cast drug-

therapeutics over the ship's rail, à la Jonah's experience.

We never did advocate the active principles as an exclusive system—because we never believed in them as the exclusive repository of remedial virtues. When the development of organic therapeutics attained form and substance, we saw its importance and promptly admitted it to our advocacy.

Soon it became evident that the term under which the journal had been launched was no longer descriptive of it, or of that for which it stood. Not only had there been a tremendous advance in other lines of therapeutics, but, in pathology and diagnosis, the whole field of applied medicine had changed. It was, therefore, decided that the appropriate title of our journal should be that by which it is now known.

It will be seen that from first to last we have never altered our principles or our aims. We never accepted the role of advocating an exclusive system, despite the efforts of our adversaries to force us into that indefensible position. Today, we believe in the active principles as fervently as we ever did, but, we realize that there are other curative principles. We still advocate the alkaloids and the other principles whenever they are our best weapons; however, we never hesitate to say so when we believe that something else is preferable.

Some progress has been made. The Pharmacopeia admits a few more active principles at each revision. The scanty records published of drug-therapeutics show an increasing reliance on these powerful agencies. Nevertheless, while more and more of our colleagues are taking them up and studying the methods founded upon them, too many as yet fail to realize the vast advantages offered and the revolution they effect in drug application. Compared with the crude and perilous method employed twenty years ago at Harvard, our treatment of infectious fevers is at once simple, safe, effective, and the only one that is in harmony with the present views upon the pathology of these diseases.

THE AMERICAN JOURNAL OF CLINICAL MEDICINE has been phenomenally successful, in that but one other medical monthly in the world rivals it in the number of its subscribers. This is, because we have pub-

lished the journal for and by its readers. We have sedulously avoided the articles whose only lesson taught was that of dependence on the writers of the same, and have sought to aid our readers in treating their patients themselves. No preference has ever been shown by us for our own pet ideas—every reader has had as free access to our pages as the editors themselves. A well-chosen and constantly growing library enables us to supplement our own stock of knowledge and to supply our readers material that no ordinary practitioner could have access to, unless he were located in one of the greater cities. The amount of research that is put by our staff upon matters that often take up but a few lines in the journal would scarcely be believed by non-initiates.

From time to time relentless death has reached out and taken one of our co-workers. Scarcely any of those who enlivened the pages of the early CLINICS yet remains. Still, the constructive character of this movement is well shown by the rise of new men to carry it along.

The future of the journal depends on *you*, Doctor. It is *your* journal. It will be what *you* make it. No periodical can possibly continue to exist when it merely presents the individuality of one man. Matters that interest the readers are vital; those that interest the editors and publishers are not necessarily so. If you feel that CLINICAL MEDICINE needs more vim, *you* are the man to put in that vim. Go to it!

Enthusiasm is the element of success in everything. It is the light that leads and the strength that lifts men on and up in the great struggles of scientific pursuits and of professional labor. It robs endurance of difficulty, and makes a pleasure of duty.

—Bishop Doane.

DOCTOR WAUGH

Doctor Waugh, whose kindly face graces the frontispiece of this number of CLINICAL MEDICINE, certainly needs no introduction. For many years he has been talking to you, as man to man, through the editorial pages of this journal. He has a way of saying things that brings him close to his readers. His stuff is not impersonal and remote; it's personal and intimate—intensely human. When you read it you feel that you are talking to an old and dear friend—a man who knows you, under-

stands your problems, is interested in you, wants to help you, and knows how. And for this reason—and other reasons—I think he is the best medical editorial writer in America. And I am not the only one who thinks so.

For a number of years Doctor Waugh has been spending his summers in Muskegon, Michigan, and his winters in the South—of late, in Texas. This winter he has lingered in the North, partly because of ill health making it desirable to stay for a time close to his friends of the profession. I know he will be glad to hear from you; but I warn you not to expect him to answer every letter. He can't do it.

Stand
Firm for your country, and become a man
Honour'd and lov'd: It were a noble life,
To be found dead, embracing her. —Johnson.

"BREATHES THERE THE MAN"

I am asked to write a "rousing patriotic editorial—something that will stir the hearts of our readers and rouse them to the importance of doing their full patriotic duty." And this I wish to do. But, if the stirring events that are happening around us every day, almost every hour, do not arouse patriotic enthusiasm to a red-hot pitch, how can I hope to do it with any words of mine, which, even though they be as vivid as I want them to be, are still mere feeble shadows of the occasion itself?

It seems to me that the question is not, How can Americans be fired with patriotic passion, but, How can they escape it? If ever there was a war that made compelling appeal to every height and depth and length and breadth of American idealism, that searched out every nook and cranny of a man's manhood, physical, mental and moral, and tried it as by fire, surely this is the war! How any man, let alone any American, can hang back under such a call to his soul without blushing to himself in the dark, is more than I can fathom.

Take the fight itself. Can it be possible that anyone is still asking, What are we fighting for? Change the question a little: leave out the "for," and ask, rather, What are we fighting? The President answered it in his last ringing denunciation—*The Thing*. The accursed, diabolical, unspeakable Thing, that holds nothing, *nothing*, sacred—not the virtue of women, nor the

honor of men, nor the helplessness of little children, nor beauty, nor decency, nor common right—but, drives ruthlessly over them all, like a damned juggernaut. As God liveth, we are fighting the seven-headed Beast; and, does any decent man or woman ask why?

It is the Beast that we are leagued together to fight. And if this be not the very elemental heart of patriotism, in God's name, what is? Make it as broad as you like; make it as personal as you please it is all one. No longer are you and I isolated savages, whose safety and honor are nothing to the other. We belong to one family. I am pledged to help defend your wife and children from the Beast; and you are pledged to help defend mine. We can no more evade our responsibility to each other than to our own families. If I fail, I can no longer look into your face; if you fail, you cannot meet my eyes. That is patriotism, stripped to the bone. Make no mistake; you and I cannot *choose* whether we will be responsible or not. *We are*. There is no elective heroism about accepting our responsibility and exercising our patriotism. There is deep, damning shame in repudiating or withholding it.

Suppose that in the city where you and I live, a brutal gang of degenerate Jack-the-Rippers should stalk the streets in broad daylight, defying the police, murdering our boys, raping our women and our young girls, and mutilating our little children. Would you shrug your shoulders and keep an indifferent mien because it was my boy that was murdered and not yours, my daughter that was violated and not yours, my child that was tortured and not yours? Behold, a worse than Jack-the-Ripper is here. Murderer, liar, whore-monger, baby-killer—all, all of these is this vile Prussian Thing; not in the heat of passion, but in cold blood, as a demoniacal, Machiavellian system.

Ay, there's the rub! There is where we pass from the fight itself to the crusade beyond the fight. After all, this damnable Prussian Thing is not a Great Exception. 'Tis not a freak. 'Tis but autocracy run to seed. It is the logical extreme development of the system which for centuries has held the Old World in its grip. France and England were strangled in its coils for hundreds of years; cast it off by violence two or three separate times before they

were finally rid of it; and have lived ever since in the shadow of its sinuous form. Russia has just wrenched herself out of its grasp; and, no matter what may now be happening to Russia, or what may yet happen, anything, anything is better than the despotism from which she has finally escaped.

But America—America threw the damnable Thing off at birth; that was her birth. Her career has been, not a living protest against autocracy, but a living example of freedom from it. And now the hideous Thing has crept up on us—US—and laid its horrid maw on us, and we are looking into its leering eyes, and feel its hot tigerish breath on our faces; and we realize that the world is not safe from it, never, never will be safe from it, till it be crushed. Yes, and we realize that we must help to crush it. We must hunt it down, like God's hounds hunting down evil, till it be cornered, snarling in impotent fury, and dragged to its death.

'Tis a solemn, deadly task that has been thrust upon us. There is no choice in the matter. In this war there are no volunteers, save those who volunteer to shirk and to slack. No decent man can make such a choice. He must, he must do, not only his "bit" but his all, or forevermore slink shamefaced from the scorn of his own self-respect. Not the gift of his money and his possessions, alone, though these, too, are necessary; but, the splendidly reckless sacrifice of *himself*, of all his dearest hopes and plans, of all that life holds precious, even of life itself, is required of him. "He that loveth father or mother, or husband or wife, or lands, more than Me is not worthy of Me."

Upon your faithfulness and steadfastness and sacrifice depends more than you dream. "It will matter little in the day of judgment," says the author of John Inglesant, "by what name you have been called, whether Catholic or Protestant, Jesuit or Jansenist, Jew or Gentile. These and similar things are mere accidents of birth and circumstance. But, it will matter greatly whether, having chosen your part, you follow it faithfully to the end. For, be sure that no misery is equal to that of the man who, when men have said 'So-and-so is there on guard, there is no need to take further heed,' has deserted his post, or faltered in the hour of danger, to the ruin of

the cause he has made his choice. God grant such misery never may be yours."

America will triumph. No sane man has any doubt on that score. In this war

God has set
Himself to Satan. Who can spend
A moment's mistrust on the end?

God knows after what terrible violence. The sun shall be turned into darkness and the moon into blood; then shall the end come. But, there will be an end. The Beast will be slain, and all that he stands for. Empires and emperors, kingdoms and kings, will pass away; their day is done. The Republic of God is at hand. But, O my brother, will you and I share in the victory? Be not deceived. Do not expect to be swept into the final triumph on the crest of a universal wave. A wave there will be, without doubt; but, it will be the tremendous aggregate of individual effort, and they who drift passively and complacently on the surface, no less than they who vainly try to stem its progress, will be submerged in its resistless tide. Not even sympathy with the cause will avail anything; nothing short of being a part of it.

What are you doing?

Had I a dozen sons, each in my love alike, I had rather have eleven die nobly for their country, than one voluptuously surfeit out of action.
—Shakespeare.

TO WHOM ARE WE INDEBTED?

Authority in medicine, the same as in science, does not exist. No man in science is justified in asserting aught that can not be supported by control-experiments. "Authorities" are men who have written textbooks, most of which are antiquated when they appear, and most of which are published through favor. For this reason, the courts will not receive any book as authority, regarding it as a mere expression of individual opinion. The scientific spirit of the day should disclaim as false and misleading any authority which will not submit to test and criticism of its truth—and truth often comes from obscure quarters. "Can any good come out of Nazareth?" "This is always the question of the wiseacres and the knowing ones," says Feuerbach. "But, the good, the new comes from exactly that quarter whence it is not looked for and is always something differ-

ent from what is expected. Everything new is received with contempt, for, it begins in obscurity. It becomes a power unobserved."

If our materia medica is of any value at all, let us remember that not a single vegetable drug is mentioned in the United States Pharmacopeia the uses of which were not discovered by the wild man first, then used in domestic medicine, and only afterward by country practitioners and next investigated by the homeopathic and eclectic physicians, and by them introduced into their literature. Then, after a time, they were adopted by the regular profession.

The self-constituted "authorities" in medicine have opposed and ridiculed nearly every advance in therapeutics, nearly every remedy, nearly every method. But, often "ridicule is the test of truth" and it is well to remember that truth is for authority, not, authority for truth.

According to Pereira, the credit of introducing cinchona rests between the Jesuits, the Countess of Chinchon, the Cardinal de Lugo, and Sir Robert Talbor, which latter employed it as a secret remedy. Mercury, as an internal specific remedy, was brought into use by that "impudent and presumptuous quack" Paracelsus. Arsenic was introduced into England, as a remedy for intermittents, by Doctor Fowler, in consequence of the success of a patent medicine, the "tasteless ague drops." Colchicum came into notice in a similar way from the success of the "eau médicinale" of M. Husson, a French military officer. Iodine was discovered by a saltpeter manufacturer. Sulphur was used in an ointment by the common people, for scabies, long before it was employed by the medical profession. Strophanthus, that is now so important in some directions, came to us from the savages of Africa, who used it as an arrow-poison; thus bringing it to the attention of Stanley, the explorer, who, through Henry S. Wellcome, of England, introduced this drug. All American vegetable drugs had their original setting in such "irregular" directions, and it is to this that the medical profession as a whole is indebted.

The same rule applies to the old compound galenics of the Pharmacopeia, such as the compound tinctures of European origin; they drifted into practice through domestic uses or as specialties of physicians

of the olden time, who often attached their own names to them. Thus we have "Glauber's Salt," introduced as the "secret salt, of Glauber"; "Goulard's extract" (solution of lead subacetate) and "Labarraque's solution of chlorinated lime." In like manner, the original home of certain materials used first in domestic practice gave us, for example, such names as Epsom salt, from the Epsom Springs, England.

The early medical history of our remedial agents is extremely interesting, the history of many of them being very romantic.

Taking it all in all, the medical profession, as a whole, must acknowledge its indebtedness to the wild man, the domestic observer of remedies (vegetable and otherwise), and the country practitioner, who was, necessarily, compelled to study the materia medica in the treatment of diseases that were his responsibility, the gathered results finally coming before persons in "authority," who either accepted or rejected the statements originating in these sources, or, investigating for themselves, gave no credit other than their own introduction of them.

Not only the Eclectics and the Homeopaths, but, hundreds and thousands of Regular physicians helped to develop the American materia medica. They did not recognize "authority," but, freely used, as they saw fit, remedies not authorized by "authority," regardless of whether they were or were not named in the Pharmacopeia.

In an article entitled "Vegetable Drugs Employed by American Physicians," contributed by Professor John Uri Lloyd to *The Journal of the American Pharmaceutical Association* for November, 1912, he shows that, out of over ten thousand general practitioners of all schools, and of those only who were college graduates and whose names were in the Medical Directory, the unofficial drug cactus headed the list as the most popular drug, being prescribed by 6239 of the 10,000 physicians responding! And, yet, the "authorities" pronounce it worthless, as they do echinacea, that was used by 5065 physicians; and, strange to say, echinacea headed the list of remedies named by physicians other than Eclectics, while it stood fifth in rank as named by eclectic physicians. It is not possible that all the physicians who use these drugs are fools. It is certainly not true that the

only men capable of judging the value of a remedy are in pharmacological laboratories or members of the Pharmacopoeial Committee or of the Council of Pharmacy and Chemistry.

Many of the drugs dropped from the Pharmacopoeia are *not* dropped by practicing physicians. "Authority" that is not experienced in practical directions can not compel a qualified physician to consider himself incompetent. He rebels against the reflection that his diploma and his subsequent experience in the practice of medicine are not sufficient to qualify him to judge of disease-expressions constantly before him, and of drug action that he knows from observation to be most pronounced.

Not infrequently we find the "authorities" to be men of restricted observation and not nearly so well versed in clinical experience as is the average doctor actively engaged in bedside-practice.

Socalled physiologic therapeutics, such as electrotherapy, hydrotherapy, mechanotherapy, massage, et cetera, were first employed by "irregulars" and opposed by "authorities"; and only when the latter were forced to recognize the value of those agencies did they "get into line." Even psychotherapy—"suggestive therapeutics"—which is perhaps the most valuable of all, was one time denounced as unscientific and quackish. Strangest of all, the very nation which laughed to scorn one of its most noted early promulgators only lately claimed itself its most ardent advocate, namely, France with regard to Charcot; and at Nancy there is a renowned hospital where only psychotherapy is practised.

To Madame Curie, the discoverer of radium, and to Pasteur, too—both of France—do we owe a debt of gratitude. A volume could be written of the beneficent discoveries that have come from hitherto obscure sources. So, let us be thankful for the good and true things that come to us, even though the "authorities" were not the first to introduce them.

The time has passed when a few men can successfully set themselves up as authorities or dictators, or arrogate to themselves any special theory or procedure. Candid practitioners today recognize good in all systems based upon scientific thought and pursued with intelligence and sincerity. By means of release from the shibboleths of the past and from rigid adherence to a

given "authority" or "school," the freedom of the present practice is greatly enhanced, to the immense benefit of the patient and the lasting honor of the physician.

We cannot too strongly deprecate any tendency to discord and contention among a body of men to whom is accorded the highest privilege decreed by the genius of science—that of alleviating human misery. Whenever the physician's range of study and practice becomes limited by prejudice or narrowness of intellectual vision, he falls below the standard set by the canons of christian sympathy and the dictates of steadfast devotion to the amplest interpretation of his calling.

Mistake, error, is the discipline through which we advance.
—Channing.

A NATIONAL PROGRAM OF MILITARY MEDICINE

An editorial article in *The Medical World* for December last makes the very timely and appropriate suggestion that the medical colleges should follow the lead of the training-camps where the medical officers of the national army are being schooled in the various duties comprised within the term of military medicine; the writer pointing out that medical colleges should teach military surgery, military hygiene, and other branches that are required to fit their graduates for military duty.

In addition to this, the editorial in question proposes that home physicians take up training in military subjects in their home towns, the medical societies to take up this work and continue it, so that all physicians may have at least an insight into military medicine. This would be of more practical value than patriotic meetings, with call to the colors and abstract remarks on preparedness.

It is suggested that a definite plan be elaborated that might be followed by all societies. For instance, it is proposed that the subject of military hygiene be taken up for the meetings of the first month, those during the first week to discuss hygiene of camps, using one of the recent books on the subject by army men. During the second week they might take up the subject of camp diseases, and during the third week, say, water and food.

The plan is, to have all medical societies that meet during the first week discuss the

subject mentioned for that week. During the second week, all societies would discuss the subject of the second week, and so on. In this way, any physician can get the information at some of the societies during the first week, and he may get the second week's subject or lesson during the second week at some other society, and so on. This will make the information available for all physicians. It is understood that all the meetings are to be held open to all physicians.

For the second month, military surgery might be taken up. The first week could be devoted to first aid in battlefield-wounds; the second week to infected wounds; the third week to fractures; the fourth week to abdominal surgery.

In the third month, military surgery could be continued. The first week could be devoted to wounds of the head; the second week to the chest; the third to any subject that has been brought up in the discussions and needs further study, and so on.

For the following months, there should be plenty of subjects that have been brought out, but need further amplification.

It is better to have the subject cover the entire week, rather than to be restricted to one night, so that, should a physician miss one meeting, he can get the information the next night at another meeting. Of course, this would be possible only in large cities where some medical society is meeting every night.

Without earnestness no man is ever great, or does really great things. He may be the cleverest of men; he may be brilliant, entertaining, popular; but, he will want weight. No soul-moving picture was ever painted that had not in it depth of shadow.

—Peter Bayne.

THE RED CROSS

We hope that every physician who reads these lines can say that he helped with his money and with his influence in the big push to raise the \$100,000,000 fund for the American Red Cross. We also hope that all of you are right now doing your bit to increase the membership to the 15,000,000 mark, which is the aim of the campaign now under way. At the beginning of the war, there were 200,000 members of the American Red Cross Society in the United States. At this writing, the number is said to be about 5,000,000. We have 100,000,000 in the United States, and, certainly, there should be at least *one* member in

every family. It ought to be easy to secure 15,000,000 members. We want to appeal to every one of our readers to do all that he possibly can to bring this about.

The aims of the American Red Cross have been stated by the Red Cross War Council to be as follows:

"1. To take such measures as are necessary, in cooperation with the Army and Navy, for the protection of the health and welfare of soldiers in camps and cantonment, and of civilians whose welfare is involved in war-conditions.

"2. To stimulate and guide the volunteer work of women in the manufacture of supplies and comforts needed by troops and civilians abroad and by men in training in this country.

"3. To cooperate with the Government and with all relief-agencies in caring for the dependent families of men in the military and naval services and to relieve suffering caused by any disaster.

"4. To maintain, at the lowest cost consistent with efficiency, machinery to assure the uninterrupted performance of these duties of the relief-work in Europe."

Certainly, every reader of this journal can subscribe to all this, and, surely, there is no American who is not proud of the work which this great organization has done and is doing at the present time. We learn from the brochure entitled "The Work of the American Red Cross" (comprising 144 pages), recently distributed, that up to date approximately \$88,000,000 in cash has been collected for the war fund. Only a very small percentage of this has been used in salaries. On the salary list, there are now only three persons who receive more than \$5,000 a year and 24 who receive more than \$2,500 a year, while 182 receive between \$600 and \$1000 a year. The big men—the real leaders in this great movement—are doing their work without remuneration.

The Red Cross has raised and equipped 49 base hospital units for the Army and 5 for the Navy. More than 12 of the Army units and 2 of the Navy have been mustered into their respective medical corps and are now seeing service abroad. The Red Cross has also organized 45 ambulance-companies, with a total personnel of 5580 men and women. A general hospital for the Navy has been established in Philadelphia, convalescent-homes have been built

at Ft. Oglethorpe and Ft. McPherson (Georgia), and mobile laboratory-cars have been provided for use in case of emergency.

There have been enrolled 14,000 Red Cross nurses, and of these approximately 3000 have already been called into active nursing-service. Millions of women all over the country are constantly engaged in knitting and making hospital-garments, surgical dressings, comfort-kits, and clothing for refugees. It is estimated that the value of the work of these faithful women during the next twelve months will amount to nearly \$40,000,000. About 3,000,000 surgical dressings are promised to be sent to France every month for the next six months.

The work of the Red Cross in Europe is under the direction of Major Grayson M.-P. Murphy, whose headquarters are in Paris. He has under his control a working staff of 804 persons, of whom 347 are paid by the Red Cross, the others being volunteers or supported by their former employers. The average cost, to the Red Cross, for each of these European employees, therefore, is only about \$300 per year.

The Red Cross is serving, through its hospital supply-service, 3423 military hospitals, French as well as American, and it operates 16 warehouses and a motor transport system. Approximately 15,000 tons of material (hospital and general relief-supplies) is distributed monthly from these warehouses.

This is only a brief outline, in fact, only a comparatively small part of the work of this wonderful organization. We have not even mentioned the establishment and maintenance of canteens, rest-houses, recreation-huts, and other means of supplying comforts to our armies and allies. We have said nothing about the commissions sent to Russia, France, Italy, and Roumania, and of the appropriations made for work in the armies of these countries; nor have we mentioned the refugee- and relief-work, the work among the tuberculous in different parts of Europe, the work for children, the medical research, and the nonmilitary work. All of these are important and all require money.

And this brings us back to where we started. What are you doing, doctor, to build up the membership of the American Red Cross, to give it the additional money

which it will need soon? We are told that the \$100,000,000 raised will be virtually exhausted by spring. The more that we are able to raise now, the less will be required later. Take hold of this problem in your own community. Get people to thinking about it. Interest the churches and the women folk, the boys and the girls, and all the other vital, energetic elements of your community. The need is great, the workers are too few.

Vigor is contagious; and whatever makes us either think or feel strongly adds to our power and enlarges our field of action.
—Emerson.

MODERN DISEASES

With the general advance of medical science, there has been developed, apparently, in modern times a host of new diseases, with which our ancestors were unacquainted.

It is a fact beyond dispute that the average man of the present day is stronger, healthier, and less liable to attacks of disease than in any preceding age. There are no more real diseases than there were a hundred years ago; but, with our increasing knowledge, we are able to observe differences not then noted, and to separate into distinct diseases, each requiring different treatment, certain affections that formerly were grouped together under one general appellation. Pneumonia, for instance, was rarely heard of in former times, yet, "lung fever" was none the less fatal, and even more to be dreaded, in the absence of any rational method of treatment. The same is true of appendicitis, formerly known as "inflammation of the bowels." Before the general use of the microscope and chemical reagents for testing the urine, diabetes, nephritis, and many other diseases were not thoroughly differentiated, but were called by the general name of kidney trouble; and they were just as common as in these modern times.

The forms of brain disease accompanied by paralysis were in existence long before the term paresis was introduced into the medical vocabulary, and the victim of alcoholic dementia is not favored with the sight of any more zoological curiosities than his predecessor who merely had the common jim-jams.

"Heart failure," is a term sometimes employed even at this late date to indi-

cate the cause of death, and it is a most unfortunate one. It really has no meaning at all, for, the failure of the heart to do its own work always occurs at the end of life. It may be said that death is always caused by the failure of either the heart or the lungs to perform their duty, and that the various forms of accidents or diseases are only indirect causes inducing such failure. Heart failure is not a disease, but, the result of disease, and there is nothing new about it whatever. When applied to organic or functional diseases of the heart, it may have some significance, but, such a general term had best not be used.

Notwithstanding the wails of the pessimists, mankind is steadily improving in bodily strength and vigor.

The average length of life is greater and the standard of bodily health higher than ever before; and, if it were not that medical and sanitary skill now preserves, for a life of imperfect health, many weak persons who in former times would have succumbed to the first attack of disease, the standard would be even higher than is actually the case.

In the works of old writers, there are many passages that show that a man was considered old and past his prime at forty, while now at that age he is in the very height of his powers. There may be more diseases now than formerly, but, there is less disease, and a vastly greater knowledge of how to avoid it, or, when attacked, to bring it to a favorable termination.

One truth discovered is immortal, and entitles its author to be so; for, like a new substance in nature, it cannot be destroyed.
—Hazlitt.

ARE SYMPTOMS THERAPEUTIC OR DIAGNOSTIC?

When anybody says that the science and art of medicine is susceptible of improvement, we heartily agree with him. When, however, such a one asserts that the practice of the entire past not only has been mistaken, but, absolutely and diametrically wrong, so that it has worked directly against the patient, instead of for him, we take refuge in our Missouriianism and refuse to accept the dictum until it has been proved to our full satisfaction. For, the chance of humanity being mistaken, or exaggerating, or posing, or just

lying is so very much greater than that of such an assertion being true.

Now we reach our text, as found in the October issue of *The Journal of the Medical Society of New Jersey*. It is from an address delivered to said State Society by Daniel E. Drake, the director of Idylease Inn. To guard against the possibility of unfairness by only partly quoting, we shall reproduce the entire opening paragraph:

"Is there anything more interesting or important in modern medicine than the realization that has at last come to most of us, that the symptoms which we have treated again and again are protective and of infinite value, rather than of harm? What a revelation this has been and what a complete revolution it has made in our treatment of the sick. Let us consider some of the most prominent protective symptoms which, until in recent years, have been erroneously treated as disease.

"First let us consider fever. One of my physician friends has the bedside-charts of his own case of typhoid fever, which were made only twenty years ago in the Massachusetts General Hospital in Boston. The treatment, directed by a prominent member of the Harvard Medical School faculty, consisted in giving the newly introduced drug antifebrin in 40- to 60-grain doses every four to six hours. The charts show frequent 10-degrec drops in temperature and a pulse rise to 180! If the patient had the constitution of an armadillo and the viability of a kicking horse, the treatment would have killed him there and then.

"Now we know that the fever accompanying typhoid, as well as all other infective conditions, is the most important protective reaction which is in immediate evidence. Without fever, the mortality of typhoid would undoubtedly be doubled—how grave a fallacy, therefore, to attempt to lower it, as in my friend's case."

The attempt to treat typhoid fever by attacking the febrile condition with dram-doses of acetanilid was absurd—the claim, though, that the fever is only protective is quite as absurd in the other direction.

To us, the indication presented by undue or too long-continued fever in a typhoid-patient is that of ascertaining the cause of the undue temperature. The great significance lies in its diagnostic value.

To repeat an example we have often quoted; in a typhoid-case where the fever lasted far into the fifth week, the doctor administered an enema of kerosene. In this way, he removed at once the fever and its exciting cause, in a mess of fetid fecal matter that had been lying in contact with the diseased tract of the intestine.

Despite Bier and his savage collaborators, we look upon this view as rational, far more so than that which makes every fever in an infection a means of cure, and nothing more. That fever in infections is protective, nobody now doubts; but, to hold that it never is injurious, is going too far. Sometimes it displays about as much consideration for the patient as did the ape who crushed the head of his sleeping master, in the endeavor to kill a fly. The pneumonic who has a temperature of 106 is in direct and imminent danger from the hyperpyrexia, even if this has been excited by an extreme toxemia. So, also, when in the eruptive fevers the temperature climbs swiftly to 112 degrees, we may safely disregard the protective theory and proceed to save our patients' lives by cooling them down to a reasonable degree.

Doctor Drake's second citation is as to the curative powers of pain. Here we come nearer to agreement. It is well on toward two centuries since Benjamin Franklin told so graphically how the pangs of gout conducted toward a more sanitary regimen. We have stood by and watched the agonies of delirium tremens, with the remedy that would have given swift relief in our pocket (where it remained), while we solemnly winked at old Dame Nature and whispered to her: "Go to it, old lady, you're on the job."

But, the therapeutic values of pain lie almost entirely in the psychic department. Otherwise it is of such preeminent importance in the line of diagnosis as to make its few somatic applications insignificant. When the pangs of strangulation direct attention to a hernia or a tight bandage, we appreciate this as a warning, never as a cure.

As the next citation, we agree most heartily with Doctor Drake. There is no such disease as indigestion, and gastric disorder simply means nature's warning that one must correct the habits. The only real remedy for vomiting is, to keep

the stomach absolutely empty for twenty-four hours. Vomiting also is diagnostic in the highest degree, as are the multifarious ailments comprised under the designation of indigestion as used by the layman. However, here the therapeutic value exceeds in importance. Gluttony and bellyache can not exist simultaneously.

One significant feature about this paper is, that it was discussed freely by a number of good men at the meeting, and not one of them disagreed with the reader in any particular. That is, the author's conclusions, exaggerated as they appear to us, were accepted by his audience as a whole. He, therefore, represents the unanimous view of the profession of his state.

Well, we must be contented to rank with the heretics.

To love truth for truth's sake is the principal part of human perfection in this world, and the seed-plot of all other virtues.
—John Locke.

DECORATION AND HEALTH

Color is a species of ornament that, like form, doubtless has its laws, though as yet neither has been discovered, and we call form and color, like much of the practice of medicine, empirical arts. We observe that the collocation of certain spaces or of masses of certain colors gives us more pleasure than does that of others, and we try to recollect these collocations, if we deal with color, and use them when we have occasion. It has been observed that the primary colors that are complementary—that is, whose mixture produces white—go well together, and that certain secondaries and tertiaries set off primary colors. Chevreul found that the saturation of the eyes with a color caused it to see the complementary color if a white surface was looked on; and Chevreul also discovered that, if now we looked at another color, it was modified by the complementary color of the first one.

In choosing a color, we should be careful to have such a one as we can live with, for, most people have their preferences and dislikes. The color of a lady's boudoir is mostly chosen because it sets off her complexion. In a room where we work, we are soon conscious of an objectionable color, which irritates instead of soothes us. Certain colors and certain

tones are either beneficial or prejudicial to health. Very dark rooms are prejudicial, and red or yellow will also have a bad effect on our health if we have to remain in rooms of either color all day every day.

A manufacturer had a women's workshop painted yellow, and found much more than the usual sickness among his employees. A doctor recommended painting the shop white, and normal health was restored among the workers. Growers of hyacinths have noticed a marked effect on their blooming when they are put in classes of certain colors.

This age is a peculiarly health-seeking one, and people do not now seek

as the Greeks did, by early rising, temperance, open-air exercise and training, but, they ask how health can be preserved and promoted by the removal of external sources of disease, so that they may have freedom to infringe nature's laws with comparative impunity. External poisons are the most important things from which to protect ourselves, especially when we have enfeebled our bodies, and these are mostly conveyed to us by mephitic vapors and what we physicians call septic dust.

We want our houses and other buildings so constructed that they can be freed outside from their palls of dust and soot by means of a fire-engine or a sponge, and inside by the broom, the dusters, and the flannels of the housemaid.

Foul and poisonous air has scarcely any connection with decoration, but, with one or two exceptions, it is in relation with pure science and its applications. The exceptions are when some of the materials used for decorations have a pernicious chemical action on the air or parts of their substance readily come off and poison us when we breathe or when in contact with our skin. The former is the case when preparations of arsenic and some other dyes and pigments are used and are not fixed by varnish.

If a man is not rising upward to be an angel, depend upon it, he is sinking downward to be a devil. He cannot stop at the beast.

THE NON-BEVERAGE ALCOHOL LAW

We wish to call the attention of our readers to the restrictions and requirements imposed upon them by the War Revenue

Act of October 4 in relation to their handling of alcohol for medicinal purposes.

This law went into effect December 1 and there are severe penalties for its violation.

The fact that no physician may purchase pure, unmedicated alcohol for medicinal use without first obtaining a permit and filing a bond with the Revenue Office is not, of itself, likely to be overlooked by the doctor, because the druggist or wholesale dealer from whom he makes his purchase will see to this. They will not sell to him unless he does have a permit or a bond certificate. The point at which, if anywhere, he is likely to trip is, in the use he makes of the alcohol that he obtains.

Briefly, the regulations are these: The doctor must not sell or dispense pure unmedicated alcohol, *under any circumstances*, to anyone who does not have a permit similar to his own. He may, however, sell or dispense not more than one pint at a time of alcohol to his patients provided he first medicates it according to one or other of the following formulæ:

1. Carbolic acid, 1 part, alcohol 99 parts.
2. Formaldehyde 1 part, alcohol 250 parts.
3. Bichloride of mercury 1 part, alcohol 2,000 parts.
4. Bichloride of mercury 0.8 gram, hydrochloric acid 60 mls, alcohol 640 mls. water 300 mls.
5. Bichloride of mercury 1-2 grains, hydrochloric acid 2 drams, alcohol 4 ounces.
6. Formaldehyde 2 parts, glycerine 2 parts, alcohol 96 parts.
7. Carbolic acid 1 dram, tannic acid 1 dram, alcohol 1 pint, water 1 pint.
8. Alum 1-2 ounce, formaldehyde 2 drams, camphor 1 ounce, alcohol and water each 1 pint.
9. Lysol 1 part, alcohol 99 parts.
10. Liquor Cresolis Comp. (U. S. P.) 10 mls, alcohol 1,000 mls.

The containers of all alcohol medicated by the prescribed formulas must bear a Poison Label.

And he may dispense alcohol as an ingredient of his compounded medicines, provided the other ingredients of the compound render the alcohol unfit for beverage purposes.

Applications for permits and bonds are rather complicated procedures, which the executed by Surety Companies, and this is doctor had better not attempt to carry out himself but should delegate to an attorney. The Government prefers the bonds to be executed by Surety Companies, and this is

in every way the best course for the doctor to follow, since the form and wording of the bond are very particular matters. The fee for the minimum bond (which covers all the requirements of the average physician) is \$5.00. Orders for alcohol have to be written, in triplicate, upon order blanks furnished by the Revenue Department.

We advise every physician who handles alcohol in his practice—and we presume that includes virtually every reader of *CLINICAL MEDICINE*—to attend to this matter without delay, if he has not already done so. We do not imagine that conformance with the law in this direction will work any very great hardship to those physicians who employ their remedies mainly in the form of tablets or granules of the active principles. But, to the extent that they do use and dispense alcohol, of course, the stipulations of the law must be strictly observed.

The world owes all its onward impulses to men ill at ease. The happy man inevitably confines himself within ancient limits. —Hawthorne.

THE WAR: THE REAL THING

Those of us who know what real war is get very tired of these preliminary folderols and the gush and hysterics accompanying. Our brave boys have assembled, taken some training, and marched away to the tune of "Tipperary," amid the plaudits of assembled multitudes and the tears of women relatives. They have swung along the streets of old London, under the eye of royalty, have progressed triumphantly through Paris, and have been smothered with flowers and embraced by pretty damsels. The papers are filled with appeals for smokes for our Sammies, for Thanksgiving and Christmas dinners, for 'broidered hankies with which to wipe their little noses, and so on ad nauseam.

Now, at last, the boys get a small taste of the real thing. The unspeakable Teutons, curious to know what manner of man the American soldier may be, gets up a little trench raid and under cover of a barrage carries off a few specimens for inspection, leaving a few dead and wounded.

How surprised is everybody! Reminds one of the early days in Cuba, when a patrol was fired upon by the Spaniards and Hamilton Fish's son and a few others were

slain. They wanted to court-martial someone at once.

The fact of the matter is, that we are not yet awake to the realization that we are at war, that we have embarked in the armageddon, participants in the hugest conflict that has ever been waged on this green earth. We need a rude shock to arouse us. Just let the news of a real battle come across, with lengthy lists of dead Americans. We just remember the North during the earlier days of the Civil War, and the same features were in evidence. But, when Sumter was fired upon, the whole people awoke at once and a fury of rage swept the land. Thenceforth there was no lack of appreciation of the task before us or of earnest determination in the prosecution of the war.

War is war, and men are going to lose life or limb in battle. Grim reality will soon replace the frills; bayonet and bomb, the flowers and charming kisses. The callow youth now singing as he marches onto the transport, will soon be the silent, efficient soldier; the smiles and dimples replaced by care-lines and thought-clouds; the roundness of well-fed youth gone for the leanness of condition.

MILK FOR THE BABIES

The high price of milk is having a very unfortunate effect of cutting down the amount of milk fed to young children, and as Dr. Grace L. Meigs, Director of the Child Hygiene Division of the Children's Bureau of the U. S. Government of Labor, says, "milk is one food that all young children must have if they are to be strong and healthy." There is no substitute for milk, and the startling increase in price is unfortunately leading parents to economize on this essential to the healthy development of their children. In New York City an investigation showed that 125 families had stopped taking milk entirely, and in 25 of these there were babies under one year of age. It is also learned that many parents are giving their children tea and coffee as a substitute for milk.

Physicians everywhere should bring it home to their clients that, whatever they economize upon, this essential element of child nutrition should be purchased in a quantity sufficient for the children's needs.

Leading Articles

Twenty-five Years' Progress in Public Health and Sanitation

By W. A. EVANS, M. D., D. P. H., Chicago, Illinois

THE record of the last twenty-five years in preventive medicine has been one of steady progress rather than of epoch-making discovery. In the early part of the last half of the nineteenth century, the Pettenkofer theory, that disease is associated with gross filth, was made the basis of health work. Cities cleaned up their gross filth and, in consequence, there was a very marked drop in the death rates of great centers of population. Late in the '80s, health-departments began to make general application of the germ theory of disease. In consequence of this policy, there was another sharp drop in death rates. During the last twenty-five years there has been no such radical change in the methods of sanitation and hygiene. Although there has been no sharp decline, there has been a steady, even improvement in death rates and sickness rates.

In 1892, Chicago's death rate was 21.85; in 1916, it was 14.52. In 1890 (the nearest yearly rate available), the death rate in the U. S. registration area was 19.6. In 1915 (the last yearly rate available), the death rate in the then registration area was 13.5.

The growth of the registration area is proof of itself of the same healthy tendency. In 1892, the only states in the death registration area were Massachusetts, New Jersey, District of Columbia, Delaware, New Hampshire, New York, Rhode Island and Vermont, besides several cities in non-registration states. In this area, 31.4 percent of the total population resided. In 1915, all of the states were in the area except Illinois, Iowa, North Dakota, South Dakota, Nebraska, Wyoming, Idaho, Oregon, Nevada, Arizona, New Mexico, Texas,

Oklahoma, Arkansas, Louisiana, Mississippi, Alabama, Tennessee, North Carolina, South Carolina, Georgia, Florida and Delaware. Some cities in these states were, however, included in the registration area.

Of the total population, 67.1 percent resided in the registration area. The indications are that this area will be materially extended within a year.

It was not possible to establish a birth registration area until 1915. That area now embraces the six New England states, New York, Pennsylvania, Michigan, Minnesota and the District of Columbia.

Typhoid Fever.—The improvement in the typhoid situation is a good illustration of what can be done in public hygiene. In 1893, just twenty-five years ago, Chicago's typhoid rate was 175. In 1916, it was 5. On December 8, 1917, it seems probable that the rate for the current year will be in the neighborhood of 2 per 1000. Other cities are keeping pace with Chicago in this regard. Even the rural districts are materially lowering their typhoid rates. This improvement has been wrought through improved sanitation and public hygiene, and especially through better sewage disposal, better protection of the water supply, and the pasteurization of the milk. In 1911, the United States Army began a demonstration of the efficacy of vaccination as a means for totally suppressing typhoid fever. The preliminary reports show that, in 1916, the 170,000 United States troops, regular army and national guard, had only 17 cases of typhoid fever and not a death. We can fairly say that within twenty-five years we have greatly repressed typhoid fever and

are now in position to suppress it completely.

Typhus Fever.—While we have not had much typhus in the United States, a limited experience in 1917 proves that we have been lucky rather than forehanded. Americans in Mexico and in other typhus-infected countries have shown a very great susceptibility to the disease. Within the last three years it has been demonstrated, as a practical proposition, that typhus could be controlled in even the worst-infected districts by antilouse measures.

Yellow-Fever.—In 1892, we were just emerging from the menace of yellow-fever. Epidemics, which prior to that time had been of yearly occurrence in the southern states, were beginning to occur at intervals of several years. Less than twenty years ago, the mosquito theory was for the first time successfully put in practice. However, there continued to be some yellow-fever in Panama up to a little more than ten years ago. Within a year a commission of experts has said that there probably is no yellow-fever anywhere in the world except in a small section of country in and around Guayaquil, and the authorities there have stated that a moderately comprehensive effort would wipe the disease out.

Malaria.—There is a general agreement in opinion that the United States is being rid of malaria, though statistical proof is lacking. Everyone is agreed that more than half the country that was malarial fifty years ago is now free from it, while large sections that were infected twenty-five years ago now know nothing of the disease. The Public Health Service and the various boards of health have recently made malarial surveys of various southern states. The International Health Commission, in cooperation with several health-agencies, has just experimentally determined the relative cost and efficiency of different methods of controlling malaria. Some governments are appropriating money for malaria control. There are many indications that the experimental work of Knott, Jones, Ross, Manson and many later scientists is bearing fruit and that the chronicler who a quarter of a century from now writes of the progress of preventive medicine will tell of the eradication of malaria from the United States.

Consumption.—The fight against consumption is planned on a basis of years of

repression and then a grand drive for suppression. The campaign along this line is being won. In Chicago, the consumption death rate in 1892 was 198.6. In 1916, it was 129.19. The number of deaths in 1907 was 4039; in 1916, it was 3227, and this in spite of an increase in population of 600,000. The reports from some cities show even a higher rate of improvement. There have been no radical discoveries in the last twenty-five years for the prevention or cure of consumption. The gain shown demonstrates the possibilities of improvement through education of the people in the right habits and customs.

Infant Mortality.—Statistics show that the greatest part of the improvement in death rates among children in the last quarter of a century is due to improvements in conditions relating to baby life and child life. Here, I will make use of statistics from Chicago, as I do so frequently in this article. I do this, because they are easily accessible, and not because they prove the point any better than the corresponding figures from other communities might substantiate it.

In 1892, when Chicago had a population of 1,100,000, 7514 babies under 1 year of age died. This was a rate of 6.26. In 1916, with a population of 2,600,000, there were 6907 deaths, or a rate of 2.765. A more accurate method of estimating is on the basis of the death rate of 100,000 babies born. Unfortunately, on this basis, no accurate comparison is possible, since no city had accurate birth registration in 1892. The best guess possible is that the baby death rate per 1000 births has been reduced about 50 percent in the course of the last twenty-five years.

Diphtheria.—In 1892, there were 1548 deaths from diphtheria among Chicago's 1,100,000 people. In 1916, though the population had more than doubled, the number of deaths was only 787. At that, the improvement in the diphtheria rate has not been as great as in some other parts of the world. Several very useful discoveries have been made and applied in this quarter century. The most important of these was, the practical application of diphtheria antitoxin to the cure and prevention of the disease. Next in importance was the discovery of the role of the carrier in spreading the disease. Among the later discoveries has been the Schick test for demonstrating

susceptibility, and the Von Behring toxin-antitoxin vaccination method.

Smallpox.—The United States has witnessed no extensive outbreaks of smallpox in the period under review, still, on the other hand, the disease has been constantly present first here and then there, never seriously menacing, and yet always a source of disquietude to some local health department. It may fairly be said that as a serious menace the disease has ceased to exist. Men in charge of armies or other groups of men completely under control no longer think of it as a menace. Still, the director of health of an unclosed community knows the danger to his office and his community. Every bit of machinery necessary for the eradication of this disease is in hand and worked out as to the minutest detail. Success waits upon the willingness of the people to be served.

The last twenty-five years have witnessed a great improvement in the manufacture of vaccine. I think some recently suggested changes in the method of vaccinating are improvements. A laboratory method of diagnosing smallpox has been suggested.

Pneumonia.—The discovery by Dochez, Cole and the others of the Rockefeller Institute staff, that there are several types of pneumococci and that the ordinary pneumococcus of the mouth is not the usual cause of pneumonia, is a recent finding of great promise. First, it lead to the preparation of a serum successfully employed in the cure of the disease. Now it is proposed to vaccinate against pneumonia. Vaccination done in the early winter confers an immunity that lasts until the summer following. Some health-departments now diagnose the type of pneumococcus responsible for each case of pneumonia reported, and regulate isolation, quarantine and disinfection on that basis. It cannot be said that up to date this discovery has materially modified the pneumonia death rate, but, it is probable that the next five years will witness a definite effort to control pneumonia on the basis of its being a contagious disease owing to a pneumococcus that is purely pathogenic and that the carrier element in its propagation is much less than it has been supposed to be.

Meningitis.—The English military authorities announce that they are able to control meningitis in military establishments. This is possible because of discoveries made

within the last twenty-five years. First, there was the discovery of the meningococcus, then that of the relation of carriers to the spread of the disease, then of the microscopic, chemic and bacteriologic methods of diagnosis, and, finally, a curative serum. The control of the disease is based principally upon practical methods for discovering carriers and disinfecting their noses.

Infantile Paralysis.—During the last twenty-five years we have witnessed a great increase in infantile paralysis. Let us hope that some of the discoveries made during our recent epidemics may show the way to methods for its suppression.

Bubonic Plague.—During the last twenty-five years there has been a pandemic of plague, but, how different in its results from the terrific pandemics of more ancient history! Even in Manchuria, the disease at its worst has been controlled. On two occasions, the disease has found a foothold in the United States—in California, in 1900, and in New Orleans more recently. However, in the meanwhile, the bacillus has been discovered to be flea-borne and the important carriers have been found to be rats and other rodents. No better demonstration of the power of health-agencies over preventable diseases, when they are given money and power, has ever been seen than in the control of these incipient epidemics.

Hydrophobia.—It was just about thirty-two years ago that Pasteur first tried vaccination against hydrophobia. Twenty-five years ago the treatment was fairly launched. Rabies has everywhere been lessened. In some countries where effort has been great, as, for instance, in England, the disease has been wholly eradicated.

War Hygiene.—The progress of sanitation and public hygiene since the present war began has been rapid. I assume that some one else will write of the improvements in surgery, and that in the course of his story he will tell of the marvelous improvements made in the treatment of infected wounds and in the prevention of gas-gangrene and tetanus. I assume also that still another will write on the improvements in curative medicine, and that in the course of his study he will tell of the perfected methods in the treatment of gassing, trench-jaundice, trench-fever, trench-foot and other war diseases.

I will limit myself to a few indications for the future based on recent events.

It is a little over ten years ago that the syphilis-organism was discovered. Other points in the life-history of that organism were subsequently discovered. Then came the discovery of the curative powers of certain preparations of arsenic. The war made manifest the necessity of including venereal disease in the category of communicable diseases and for making efforts to control them. The more advanced health-departments are now well launched on such programs. Furthermore, the public sentiment necessary as a backing for such work is aroused.

The war has precipitated agitation, in England, for a ministry of health. The indications are that this will be an accomplished fact before this article appears in print. Canada is rapidly following suit.

Measles has never been seriously regarded as a controllable disease by health de-

partments. A military authority—Colonel Munson—announces that measles is a respiratory disease and is fully controllable and preventable.

This by no means is a complete review of even the important accomplishments in sanitation and preventive medicine during the last quarter of a century. There is made no reference, for instance, to great campaigns that have contributed to the results indicated. Such accomplishments as improvement in water supplies, in milk supplies in general, the pasteurization of milk, better sewage disposal, the control of flies and mosquitoes, besides other improvements too numerous to mention, are not touched upon. In fine, the whole period has been one of steady, progressive improvement, productive of results for itself and laying the foundation for greater improvement in the next quarter of a century.

The Changes in Therapeutics During the Past Quarter of a Century

In Retrospect

By GEORGE F. BUTLER, A. M., M. D., Kramer, Indiana

Medical Director, Mudlavia; Kramer, Indiana.

AS I sit alone in my library this December evening, I think of the days of long ago, when I dreamed of the future; not then realizing, as I do now, that every minute the hard present is crowding each one of us off into that unknown land that has no end and is ever changing.

The past alone occupies my mind tonight, and no barren lot in life, no deprivation, no disillusion shall or can ever rob me of the memory of those early days when, full of faith, hope, and lofty ideals, I resolved to be a physician.

Drugs and Drugging of the Dying Generation

I recall vividly my early boyhood days back in the 'sixties, when I accompanied my grandmother to the fields and woods, to gather medicinal plants, which were later hung up to dry on the big brown rafters in the garret; that wonderful mysterious garret, the roof-boards stained darkly with the rainstorms of many years, the floor piled

with castoff clothes, nuts, old books, pamphlets and furniture, all odorous with the drying herbs.

And the village drugstore, where I sold bloodroot, pokeroor, mandrake, and many other roots and herbs we had gathered! It seems to me that I can smell the peculiar scent of that drugstore as plainly as I ever did. The odor signified to me healing, something curative. No pharmacy has that odor today.

I implicitly believed then that our family doctor—and, for that matter, my grandmother—could select from that drugstore or from our garret a drug that would cure any disease known; for, had I not myself experienced the beneficent effects of bone-set-tea, "composition," "picra," sulphur and molasses, and other potent remedies in the various ailments of my childhood?

My faith in these simple remedies was natural, for, I knew, or thought I knew, that both my grandmother and the doctor cured nearly every sick man, woman, and

child in the neighborhood, save those whom God in His infinite wisdom removed from among us.

So, very early in life, I resolved to be a doctor; in 1874, I began as a clerk in the village drugstore, and in 1887 I took up the study of medicine in Rush Medical College, so that for over forty years I have been acquainted with physicians and familiar with their various and varied methods of practice.

I entered upon the practice of medicine with as unbounded faith in drugs as I had when a boy. Even as late as 1896, when the first edition of my textbook on *materia medica* and therapeutics was published, I still had the faith—but, let me add, that during these later years my confidence in many of my old medicinal friends has been more or less disturbed, although I still cling tenaciously and loyally to many remedies that I have been told by so-called “authorities” are worthless.

What changes have taken place in therapeutics in the past twenty-five or thirty years! While I am in this retrospective mood, let me recount to you some of the many changes I have witnessed; and you will make allowances, I am sure, if I make this article somewhat in the nature of a historical narrative, interjecting now and then a few personal comments, rather than elaborating a labored scientific résumé of the subject.

I well remember when ten to twenty grains of quinine sulphate was given within a period of not more than two hours for reducing the temperature in lobar pneumonia; or, for the cough, chloral hydrate (which was then a comparatively new remedy) with morphine, belladonna or hyoscyamus, and, if stimulating expectorants were needed, senega, squill, oil of turpentine and such like; while carbolic acid, creosote, the sulphocarbolates and other antiseptics were commonly employed, poultices and compresses were almost invariably applied to the chest, and I must not forget the big dose of calomel given to “clean out the bowels.” You know what the up to date treatment of pneumonia is—good nursing, plenty of fresh air, “watchful waiting,” and, if one is very scientific, the specific treatment with serums and vaccines.

I can remember when cold baths and the drinking of cold water were considered dangerous in cases of typhoid fever, still,

by the time I entered the practice of medicine, cold baths were all the vogue, as also were antipyretics. Some of my teachers and many physicians I know prescribed large doses of antipyretics, notably quinine sulphate and antipyrin, in the treatment of typhoid fever. You are doubtless familiar with the present treatment of typhoid fever! What a change!

Probably there has been a more radical change in the treatment of diphtheria than in that of almost any other acute disease. Previous to the early 'nineties of the last century, when diphtheria-antitoxin was discovered and introduced, the internal local treatment consisted in painting the affected areas of the throat of the diphtheritic patient with powerful escharotics, such as nitric acid, chromic acid, bromide, silver nitrate, and spraying the throat with a solution of carbolic or salicylic acid, chlorine-water or tincture of iron chloride, while internally large quantities of brandy were given every half to one hour, this latter not especially to sustain the patient, but, as the “authorities” recommended, for its “constitutional effects.” The mortality of diphtheria was very high in those days, while under the present way of treating the disease the mortality has been reduced seventy percent.

It was only as recently as in about 1890 that specific treatment of infectious diseases (in the meaning of specifically antibacterial and antitoxic) had its birth; tuberculin in 1890, diphtheria-antitoxin soon afterward. Before then, tentative experiments had been made in immunization against anthrax, but, unless I am mistaken, tuberculin was the first antibacterial remedy that was put out. After that, of course, the whole series of vaccines, bacterins, antitoxins, and serums came in quick succession. Then came Ehrlich's studies in the aniline-dyes; the discovery of atoxyl by a French chemist, its investigation and development by Ehrlich and other German investigators, and the application of arsenicals in many and various organic forms, in the treatment of protozoal diseases. Soon after the introduction of salvarsan, the remedy was heralded as a specific for syphilis, and mercury and potassium iodide practically were abandoned in favor of “606.” But, the pendulum swung too far and now is swinging back, for, the majority of syphilographers today, if I am not

mistaken, are using mercury in all cases, in conjunction with salvarsan.

Germ-products have been employed extensively, during the past few years, for the prevention of certain diseases, notably diphtheria-antitoxin and antivaricellar and antityphoid vaccination. Antitetanic serum has proved of great prophylactic worth, although for curative purposes its value is less well established. Antidyseric and antipneumococcic serums are being used, as yet, with somewhat doubtful effect. Fairly good results have been obtained from serums against bubonic plague and Asiatic cholera, while meningococcus-vaccine has given but inconclusive results.

At the present time, owing to the conflicting reports submitted, it is impossible to arrive at a just estimate of the evidence regarding vaccination and serum-treatment of infections generally. The view with regard to vaccine-treatment of staphylococcus-infections is generally favorable, although excellent clinical observers claim equally good results by the older methods. I have noticed that recently a considerable number of physicians have been making a specialty, as it were, of vaccine-therapy, and they enthusiastically support this line of treatment. Quite recently I read an article on the vaccine-treatment of rheumatism and arthritis, the author of which advised the use of an autogenous vaccine made from diplococcus rheumaticus obtained from the oral cavity, but, added that, if it were impossible to secure an autogenous culture then to use a stock vaccine, and if the first vaccine did not succeed then to try another, this experimentation to be continued until a satisfactory one were found or the possibilities exhausted. If similar advice were offered by a drug therapist, how he would be criticized! The author of the aforesaid article redeemed himself somewhat, however, in my estimation, in closing his article by advising the free use of alkalis in addition to the use of vaccine in acute rheumatism. I doubt not that a few of his patients recovered.

Came the Synthetic Antipyretics and Elegant Pharmaceuticals

The early 'nineties also marked the beginning of coal-tar derivatives. Some of you remember, perhaps, that antifebrin came out in 1889 or 1890 and that it was rapidly followed by others, thus devel-

oping into a long series of coal-tar derivatives, good, bad, and indifferent, although very few would be classed in the third category. I recall with some regrets the practice, adopted for a year or two in my service at the Cook County Hospital, of giving from five to ten grains of antipyrin every two or three hours as an antipyretic in cases of typhoid fever, pneumonia, and other febrile diseases. I am somewhat comforted, however, by remembering that a few of the patients survived. I venture the assertion that but few of my readers can recall the names of more than two or three of those coal-tar derivatives, to say nothing of employing them in their daily practice.

In this connection, I am reminded of old familiar names that I rarely see mentioned nowadays, among them aconite, gelsemium, valerian, gentian, veratrum viride, cannabis indica, arnica, rhubarb, grindelia robusta, squill, conium, matico, bromoform, iodoform, tannic acid, croton-oil, and a lot more; and where, oh where, are these that I so well remember, balsam of copaiba, oil of santal, buchu, cubebs, liquor potassae, sulphate of zinc, black wash—those pillars of hope to the young chap of twenty-five or thirty years ago! I cannot believe that there has ceased to be need for these old-time specifics. And, of the host of vegetable remedies that are conspicuous by their absence in the last edition of the Pharmacopeia, what of them? Can it be true that they all have been found false, unreliable, worthless? In their place, one finds, among many other new remedies, liquid paraffin, phenolphthalein, ichthyol, hexamethylenamine, orthoform and its analogues, aspirin, protargol, argyrol, not to mention many others.

Along, too, in the 'nineties, there was a great move in so-called "elegant pharmacy," and we were overstocked with palatable elixirs and other potent (?) pharmaceuticals. The literature of these preparations promised much, and I am suspicious that many a doctor of twenty or twenty-five years ago acquired his knowledge (or ignorance) of therapeutics from the commercial pharmaceutical literature of the time.

In the matter of drug-therapy, the tendency toward getting away from or at least simplifying and using more correctly the old-time galenic tinctures, extracts, and all the rest, also took its inception about

twenty-five years ago, and active-principle therapy (sometimes called alkalometry) began coming into the foreground a little later.

Active-principle therapy has been and is still very popular and undoubtedly grows in favor as the profession becomes more familiar with the giving of definite instead of indefinite remedial agents. Doctor Abbott can tell you about this. But, despite all the innovations and changes, have not the worthy galenicals survived? Professor John Uri Lloyd, of Lloyd Brothers (who, according to my notion, make the best liquid preparations of vegetable drugs in this country), can tell you whether this class of preparations is holding its own.

The Latterday Biologic Preparations

I confess, I do not know "where we are at." I no sooner hear of one new treatment or remedy before a new one seems to demand my attention. Not many years ago, my esteemed and talented friend, Dr. Charles E. de M. Sajous, of Philadelphia, brought out his remarkable work on the internal secretions. I don't remember the exact date when thyroid substance was first employed, but the development of medication by means of the internally secreting glands and other glandulous substances, and their extracts, is a development of the last quarter of a century, and bids fair to prove of great value in the treatment of certain diseases. Thyroid extract, we know, is of the utmost efficiency in various conditions of diminished thyroid secretion, including not only myxedema, but, cretinism, some forms of obesity, and various atypical nutritional disorders of the elderly, while there is perhaps no internal remedy equal to "thyroid-ectin" in hyperthyroidism, notably of the exophthalmic form. Those of you who are familiar with this subject know the great value and uses of such substances as adrenalin, thymus gland, pituitary body, ovarian extract, etcetera. "It is not unreasonable to hope," says A. L. Benedict, "for glycolytic ferments in the treatment of diabetes and for ferments to regulate the fat deposit and restoration, and even for such as may profoundly modify various metabolic processes as yet vaguely understood."

It is within the last quarter of a century that pharmacological work was undertaken more thoroughly, more exactly, and in far

greater extent than ever before. Experimental investigation of drug-action on animals is the work of this period; but, like many other things in medicine, hasty deductions by enthusiasts led to inaccurate reasoning and imperfect results. Pharmacologists failed to take into account that there is a difference in the action of certain drugs in disease and in health, and that, moreover, there is a mighty difference between a sick, anxious man or woman and a healthy pup or guinea-pig. However, I am glad to see a closer relationship growing up between pharmacologists and clinicians, there being already noticeable a closer contact between the science of drug-action and the art of therapeutic application.

There Is Some Good in All

Along with the progress and changes mentioned, there has been rapid progress and development in what has been appropriately termed, by J. Madison Taylor, "reconstructed therapeutics" or allied therapeutic agents. These agencies are, briefly, dietetics, hydrotherapy, electrotherapy, roentgenotherapy, radioactive therapy, all branches of psychotherapy, mechanotherapy, and spondylotherapy, etc.

I quite agree with Taylor (whose article in *The New York Medical Journal* for June 9, 1917, I would advise you to read) when he says: "Reserve forces of the organism are ample, if they are made available, conserved, and fortified by means of agencies exerted from without, and are on a par with agencies exerted from within. . . . While it is obvious that certain remedial agencies taken into the body (for instance, medicaments and drugs) are at times absolutely necessary and that nothing else will produce the desired effects, it is equally obvious that external agencies under other circumstances furnish full equivalents. The question for the clinician is, How can most desirable effects be secured in any given instance by approaching the problem from both angles. This includes the inquiry of how to get the best results from both means of approach."

Having made therapeutics in all its branches a careful study for many years, I am fully convinced, from my study, observation, and experience, that the average regular physician has overlooked many, many excellent methods of treatment that have been utilized by so-called "irregu-

lars"—to the great advantage of patient no less than physician. If we were wise, we should carefully study these various efficient agencies and avail ourselves of any or all of them as occasion might demand.

"There is a reason," and, indeed, many reasons why the Osteopath, the Chiropractor, the Electrotherapist, the Hydrotherapist, and the Christian Scientist have thousands of followers who formerly, perhaps, consulted the old-school physician. It is needless and foolish to say that the people who have left us are all of them deluded and that all those who practice these various methods are charlatans. There are many elements of truth in every single one of these systems of cure. We no more have a monopoly on truth than we have of the sick people of this country. We did not discover every good drug or remedial measure, by any means, as you will find out—if you do not already know it—when you read the editorial under the heading, "To Whom Are We Indebted," that appears in the present issue of this journal (page 4).

I am not at all sure but that there has been more valuable progress in so-called "physiological therapeutics" and especially along the lines of psychotherapy (mental readjustment or reconstruction) during the past decade than has taken place in other therapeutic lines in the past twenty-five years.

There never was a truer statement uttered than this by Doctor Taylor: "A sick human being is something other than a living body afflicted with a damaged organ or disease-processes or their effects. The entire organism is thrown out of alinement. To relieve the malady, it is seldom enough to define just what and where the major phenomena are or how they are manifested, and to administer suitable medication and reassurance. The mind, always a prominent factor in human derangements, is contained in, and conditioned by, an essentially mechanophysical organism. The sick body is also an aggregation of biochemical structures and forces which have become perverted and require particularized regulation. It is likewise a human mechanism out of gear."

Within the past few years, we have been able, through a better understanding of diets and the action of certain medicines, to treat more successfully than ever before biliary lithiasis and diabetes. The employ-

ment, too, of alkalis and acids is now upon a very satisfactory and rational basis.

We are now able to treat fairly successfully uncinariasis, which for so long was unrecognized and neglected. In thymol, we have, perhaps, a specific for the hookworm.

In the control of hemorrhage, we have made remarkable strides since the introduction of subcutaneous and intravenous medication with such drugs as ergotin, adrenalin, and emetine, while, after hemorrhage or for combating shock and collapse of whatever origin, normal salt-solution has proved of the utmost benefit. Fischer's solution and lime-free purgative salines, two comparatively recent additions to our armamentarium, are very efficient in cases of albuminuria, uremia, edema, and arteriosclerosis.

The old drug-treatment of pulmonary tuberculosis by means of codliver-oil and cough-mixtures has been practically abandoned in favor of hygienic measures, such as rest, good food, fresh air, and other nonmedicinal measures.

The progress that has been made, within the past few years, in anesthesia, both local and general, has been almost phenomenal, as is well known by anyone who is at all conversant with medical literature.

The Blight of Therapeutic Nihilism

Under the influence of the German school and with the marvelous progress in diagnosis during the past twenty-five years, therapeutics fell to a very subordinate position, so that it became rather popular to be classed as a therapeutic nihilist, and, for a physician to attempt to treat symptoms and not causes would be sufficient grounds for the "authorities" to call him an ignoramus. But, I am glad to say that within the last few years therapeutics has come into its own and that there unquestionably is now an increasing interest in the subject.

"The real physician," said Broussais, "is the one who cures; the observation which does not teach the art of healing is not that of the physician, but, of the naturalist." As long ago as 1907, I wrote in *The Medical Record* that we should do more than classify diseases as a botanist might sort and classify plants and attach to them their proper names. We are dealing with human beings, not some dried specimens, which we label and place in their proper places in a herbarium; al-

though really I sometimes think that there are many ultrascientific physicians who would prefer to confirm their diagnosis by necropsy and preserve a few pathological specimens than to assist the patient to recover when the diagnosis happens to be in doubt.

I remember a story told by "Uncle" Allen, formerly president of Rush Medical College (Chicago). He was being shown through a large pathological laboratory in Paris and was wearily looking at shelf after shelf loaded with pickled specimens of organs and tissues from people long since dead. At last he turned to the great pathologist conducting him, and said: "Great God! Where are the people that you have cured?"

To prevent and cure disease, is the physician's actual business in life; and it is here that success is most to be desired. Our success is measured by our ability in this direction, for, the public cannot be expected to estimate us by any other measure than that of our usefulness. Even Doctor Osler, who is not much of a believer in therapeutics, says: "There is no one measure that can compare with the decrease of physical suffering in man, woman and child when stricken by disease or accident. This is the one fact of supreme personal import to every one of us. This is the Promethean gift of the century to man."

Let Not Your Patient Be a "Case"

We should not look upon each patient, when calling upon us for aid, as a "case," of interest only as a victim of some morbid process furnishing us an opportunity to demonstrate our diagnostic skill; but, rather, he should appeal to us as a suffering human being possessing the attributes of humanity collectively, together with some variations that form individual peculiarities, and who should be relieved if it be in our power to do so. Shall we be so "scientific" that we refuse to treat symptoms, because we may be unable to name the "disease," or because, say, the patient is suffering from pneumonia or some other acute, self-limiting disease, so called?

No less an authority than Dr. Oliver T. Osborne, professor of therapeutics in the medical department of Yale University, says: "Whether or not the lesion can be successfully treated, objectionable or disturbing symptoms must be stopped or ameliorated. No one but the consultant and

text-books can refuse to treat symptoms; the practicing physician must, and should, treat the symptoms. The banal phrase of "symptomatic treatment," pointed at with the finger of scorn, must now be recognized as of great importance under the new name of the "necessary treatment of symptoms."

Pain cannot and must not be suffered, lest cardiac depression and exhaustion occur. High prolonged fever must be reduced, but, not every slightly elevated temperature. Too high blood pressure must be combated, and circulatory failure must be guarded against, and combated when present. Almost every acute disease will cease, and the patient will recover, provided we can sustain his heart. It is the heart-age. The heart fails, and the patient dies even before we have got well into our fight against disease. We have come from the bleeding-, "vomiting-" starving age, through the aconite and alcohol-ages, to the feeding and strychnine-age. All this showing the "change of heart," both in ourselves and in our patients. Now, too much strychnine is being given.

Students are not sufficiently taught, while the practitioner does not often enough consider the disturbances of function due to, or caused by, the disease that is present. Medical students are so engrossed in the pathology, differential diagnosis prognosis, and specific treatment, if there is any, as to get the whole idea of the subject under the caption of "the disease," instead of under the caption of "the patient who has the disease." Hence, the patient himself and his disturbed physiology or disturbed functions are forgotten—to his detriment. Just what functions may be disturbed depends, of course, upon the disease, the lesion, and the prominent symptoms; however, it is an axiom that disturbances will occur, and they should be corrected, if possible.

The life processes must go on in illness as they do in health, nutrition must be kept up, excretion must occur, repair by sleep must take place, and the organs concerned in these life processes must be coaxed into the greatest efficiency possible, with the handicap that they are continuous.

It rarely is possible to destroy the cause of disease. In the majority of diseases, perhaps, it is impossible to overcome or remove the cause; nevertheless, we can counterbalance many of the primary effects. For example, since we are unable to dissolve urinary calculus, we must endeavor

to annul the spasm and the pain occasioned by the presence of the stone, and also, by proper diet and therapy do something, not against the concretion itself, but, for removal of the causes that have made it to form. Although we cannot make new heart-valves out of imperfect ones, nor but rarely restore a degenerated heart-muscle, we can, by proper treatment, relieve the symptoms resulting from failing compensation.

We often see certain symptoms accompanied by certain others, and we observe, in general, a constant succession in certain groups of symptoms. Disease is nothing but a new manner of being in the organs, which present either new phenomena or different modalities of normal ones. Herein lies the difference between clinical medicine and pathology; the latter shows us the species and genera of disease; the former compels us to bear in mind that it is not a disease, but, a diseased person with whom we have to do.

The morbid phenomena determined by numerous and different conditions vary unceasingly, according to the varying combinations of these conditions; consequently, it is impossible to refer disease-conditions to certain types that are invariable and uniform. If all individuals had organs constituted in the same manner, if all were endowed with the same dynamic energy, if climatic conditions were the same for all, and if all could be subjected to the same psychophysical life, the same perturbation would then produce the same effects in all, and in the same invariable order of succession. In such a case, there would be as many diseases as there are varieties of initial perturbations, and they could be classified as one classifies chemical reactions.

Disease is made up of morbid symptoms and effects. But, the relation of causality and dependence that unites these elements often requires that a system of treatment should take cognizance principally of symptoms, not so much on account of the value of the symptom in itself as on account of the symptoms which depend upon it, and the morbid effects which it may produce.

Every symptom represents a constituent element of disease, but, all symptoms have not the same hierarchical value and do not all deserve to be placed in the class of morbid elements. In annulling a symptom, one does not confine himself to destroying its

effects and simplifying the morbid conditions; for, by this means, many others can be avoided, when they would naturally and physiologically follow from the existence of the one that was to be suppressed. Symptomatic therapeutics, therefore, in my opinion, not only is curative of a portion of the disease, but, besides, preventive of ulterior morbid phenomena, complications and aggravations.

Find the Cause—But, Relieve the Sufferer

If we are called to treat a sick person, our first thought should be, to discover the cause of the disease. That cause, when discovered, either will still be in existence or will have passed away. If it still exists, we must do our best to destroy it, to neutralize it or to prevent its obvious results. If the original cause has disappeared or if it is not amenable to treatment, we may operate upon it; but, we can and should direct our efforts upon its results. These results may be primary, secondary, tertiary, et cetera, and it will be our duty to fight them, choosing for particular attention those which are the most grave, the most perturbant and the most insupportable.

By means of drugs alone, we can cause to be restored some of the normal constituents of the blood when they are deficient; we can remove abnormal substances present in the blood, and, if we have reason to suppose that the products of imperfect metabolism are present, we can greatly facilitate their excretion by the kidneys and bowels. We can antagonize and destroy the effects of certain toxic matters that cause disease. We can mitigate or limit both external and internal inflammations. We can act, for example, upon the inflamed mucous membrane of the bladder, by sedatives or stimulating germicidal substances; we can also influence the lining membrane of the tubes of an inflamed kidney. We can increase secretion in the neighborhood of an inflamed part, and can alter the general tension of the vascular system. The local vascular condition can be modified by dilating vessels in adjacent parts, and we can exercise a sedative influence upon the mechanical conditions affecting an inflamed part. It is thus that morphine is employed in peritonitis.

The products of ordinary inflammation that interfere with the functions of tissues may, when consisting of cell-growths, be broken up and absorbed under the influence

of mercury and potassium iodide, as the products of syphilitic inflammation certainly are. There is reason to believe, also, that we can cause the absorption of inflammatory deposits by stimulating the nerve endings in adjacent areas. Arsenic can be shown to have a very decided effect upon the nutrition of the skin, and it often distinctly influences inflammatory deposits therein.

Chloral, atropine, physostigmine, strychnine and several other drugs act upon the tissues of certain parts of the brain and spinal cord and thereby increase or decrease the functions of these parts. We can depress the functions of the motor-nerve-endings with coniine, and the sensory nerve-endings with aconitine. We can paralyze the involuntary muscle fibers directly with the nitrites or indirectly with chloral hydrate, drugs which depress the functions of the vasomotor center. In valvular affections of the heart we can not remove the chief pathological condition, but, by acting upon the cardiac muscle and its ganglia, we can so strengthen and moderate the beat as practically to restore its normal function. We can stim-

ulate or depress the tissues of the various glands. We can improve the nutrition and, therefore, the function of almost all tissues.

In closing, let me add, briefly, that, despite the many radical changes that have taken place in medical practice since I entered it, I am thankful for my early faith in doctors and in their medicines; and, although many of my idols have been shattered, and I am, perhaps, in possession of more truth, more knowledge, I nevertheless should delight to go back, for a little while at least, to the days when I roamed the woods with my grandmother, gathering medicinal plants, away from the hustle and bustle, competition and skepticism of the present day. For all that, I know full well that this is an age of progress, and in my mature manhood I look back upon the dreams of youth, and they seem bloated with infancy. They appear to be without sinew or bone, and I am forced to say with Froude:

"In every department of life—in its business and in its pleasures, in its beliefs and in its theories, in its material developments and in its spiritual connections—we thank God that we are not like our fathers."

"Before It Happens"

By SOLOMON SOLIS COHEN, M. D., Philadelphia, Pennsylvania

THE lawyers have a phrase: "*Time is of the essence of the contract.*" Doctors also should realize and take to heart the fact underlying these words.

Abraham Jacobi says: "*The time to treat heart failure is, before it happens.*"

J. Solis Cohen said in the preantitoxin, preincubation days, when tracheotomy was practiced for laryngeal diphtheria and membranous croup: "*The time to open the trachea is, when you begin to think that perhaps it may become necessary.*"

I have permitted myself to say concerning the use of oxygen in pneumonia: "*It will not revive the dead.*"

The disappointment experienced by many practitioners in the use of remedial measures lauded by others is often owing to the neglect of the factor of *timeliness*. If I may again quote myself: "I have a robust faith in the efficacy of the *right drug*, given to the *right person* in the *right dose*, at the

right time. But, I have no such faith in drugs given after the right time has passed. It is of time only that I am now writing—I assume the choice of drug and dose to be appropriate to the individual case.

What is true of drugs is true of all other remedial measures—physical or psychical, medical or surgical.

This fact was forcibly illustrated in my service at a certain hospital, recently. A burly Negro was admitted with an "apparently mild" case of lobar pneumonia. In regard to these "apparently mild" cases, there is much to be said. I'll only digress now so far as to say, Don't be deceived by them. The patient exhibited evidences of arteriosclerosis and of mitral stenosis.

Doctor R. Cabot, of Boston, believes that mitral stenosis frequently is unrecognized. This may be true of Boston. But, even there, if more attention were paid to the

jerky action of the heart, to the disproportion between cardiac effort and pulse result, and to the tactile characteristics of the poorly filled artery with its relatively slight excursion and relatively rapid beat, then cases might not be missed so often. This, however, is an "aside."

In the case here spoken of, the interne was instructed to watch the patient closely for evidences of *impending dilatation of the right heart*, and to bleed *at once*. (Incidentally, let me say that the mortality in hospital cases of pneumonia often bears an inverse ratio to the vigilance of the interne on duty—a factor that statistics can never exhibit.) This interne is an alert, quick-witted, observant young man. He called me on the telephone late that night, to tell me that our patient had suddenly become much worse: the respiration approaching 60; the pulse reaching 140; the systolic pressure being 120; the diastolic pressure 80; and small moist râles appearing over both bases. "Bleed," I replied. "I've done it!" was the answer. "I took 12 ounces. The pulse has fallen to 120, the pressure has gone up to 126, the respirations are only 30, and the râles are diminishing. However, I wanted your approval, in case anything goes wrong. *I called you before; you were not at home, though.*"

The next day, the pulse rate had again increased, but only to 136, the pressure remaining at 126, while the respirations remained at 30. The general symptoms were less urgent. At this writing the man still

has to go through several days of doubt and struggle. I cannot predict with certainty his recovery. At all events, though, he is *not dead of pulmonary edema*, as he might have been, and in all probability would be, without the *timely* bleeding on the night following his admission. To have waited for my routine visit the next morning, or even to have waited until I could be gotten on the telephone—which proved to be three hours after the first call—would have been to let the *opportune moment* pass. A later bleeding having failed, the treatment would have been discredited in the minds of my interne and of his colleagues. As it is, every one of the bright young fellows in that hospital has received an object lesson, the utility of which will not be impaired, even should our patient fail to weather the infection and to recover from his malady.

For, the bleeding was *not, to cure pneumonia*, but, *to avert heart failure*, and consequent death by *intrapulmonary drowning*. *And this is accomplished.*

I do not dwell upon the other features of treatment—quinine dihydrobromide, posterior pituitary preparations, digitalis, oxygen, all used according to indications—because the object of this communication is merely, to emphasize the necessity of *doing in time whatever is to be done*. I have thought that I could make no more useful contribution to the anniversary number of the journal. The gist of the whole matter is: "*Do It Now!*"

THIS IS MY DUTY

*To use what gifts I have as best I may;
To help some weaker brothers where I can;
To be as blameless at the close of day
As when the duties of the day began;
To do without complaint what must be done;
To grant my rival all that may be just;
To win through kindness all that may be won;
To fight with knightly valor when I must.*

—By S. E. Kizer.

A Quarter of a Century of Obstetrics

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

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Asepsis

WHILE obstetrics has, perhaps, not made such striking and spectacular strides in the past twenty-five years as has surgery, it, nevertheless, shows a record of progress that is healthy and satisfactory. If we go back a third of a century, the contrast with present-day conditions is more striking, for, that takes us back to the introduction of asepsis and antisepsis. It was my good fortune to enter the profession just as this change was taking place. It is not easy for the doctor who has been graduated in recent years to picture to himself the conditions of thirty-three years ago. In those days, most doctors washed their hands *after* an obstetric examination, instead of *before*. Every now and then, some family-doctor would have an epidemic of puerperal fever among his lying-in women, and sometimes he even would abandon all obstetric work until the thing had blown over. In a vague way, it was believed that somehow the doctor carried the contagion, while by many it was thought that the clothes were the vehicle. After relegating his obstetric work to his confrères for some weeks, he eventually would resume it, when, if he was lucky, all would be well again, until the next epidemic supervened.

Twenty-five years ago, the idea and practice of asepsis had been pretty generally established, although the technic still was in many respects faulty. In the working-out of any new idea, it is inevitable that mistakes should be made. Great stress often is put upon an unimportant point, while matters of real importance are overlooked; and, in this respect the adoption of asepsis in obstetrics was no exception to the rule.

At first, the idea took the form of antisepsis rather than asepsis. Patients were doused with powerful antiseptics before labor, during labor, and after labor; and even during convalescence they were given no respite from the everlasting germicide douche. It was in vain that some of us raised a voice of protest, that we pointed

out the fact that nature does some things in the way of protection herself, and that surgically clean hands and instruments were of more consequence than the douche-bag.

There always are radicals who insist upon carrying to extravagant lengths every new idea that comes their way, and they do not hesitate to denounce as "old fogies" the cooler heads who refuse to follow their lead. We see this in every department of medicine. New procedures are constantly coming into vogue, for a time are lauded to the skies, and then either go to the scrap-heap or are greatly modified, and in the end what they contain of good becomes a part of practical science. This process of sifting out a few grains of wheat from bushels of chaff is, probably, inevitable while human nature remains constituted as it is; however, there is one harm that the cause of scientific medicine suffers from these lightheaded radicals, this "lunatic fringe" of the profession, who carry every new idea to an extreme; that is, that the whole profession suffers in the eyes of the laity, who come to sneer when they see a procedure condemned which a short time before was praised sky-high. The people then assert that medicine can not possibly be a science when such contradictory things occur. They do not understand that the whole profession can not fairly be held responsible for the vagaries of a few.

To proceed: Gradually the principles of asepsis have been applied more and more intelligently, so that today the parturient woman is pretty safe from all danger of infection.

The Fear of Vaginal Examinations

Of late years, it has been taught in certain quarters that vaginal examinations in labor should be abolished altogether, and that as complete information as to diagnosis and progress can be obtained by external examination. This idea has not found much favor with the rank and file of the profession. The difficulties and uncertainties of the method would expose the patient to greater dangers than will the

trifling risk of vaginal examinations, which under strict asepsis are as safe as any surgical procedure can be. Without the information obtained by vaginal examination, the obstetrician most assuredly is hampered by more or less uncertainty as to diagnosis and progress, a few enthusiasts to the contrary notwithstanding.

This unreasoning fear of introducing the hand into the birth canal during labor causes risk to the patient in other ways, also. Because of it, some doctors are afraid to ascertain whether fragments of placenta or large clots are retained in the uterus, and so, postpartum hemorrhages occur needlessly. When they do occur, some are afraid to undertake the one prompt and effective means of stopping the bleeding, namely, to introduce the hand, clean out the uterus, and insure contraction by friction of the mucous membrane with the finger-tips.

The correction of faulty presentations and positions by internal manipulation, especially the correction of occipitoposterior positions, affords another example of disregarding the minor risks of producing infection for the purpose of avoiding greater dangers.

This fear of conveying infection with the hand was a natural reaction against the careless methods of the preaseptic period, but, with the thorough methods of today for securing clean hands and instruments, the danger is practically nil. In my last thousand deliveries (probably more), I have made it a routine practice to assure myself, by exploration with the finger-tips, that no fragment of placenta was left in the uterus, and, yet, there have occurred no infections worth speaking of.

With such an experience, is it any wonder that the fear of making vaginal examinations seems to me so trivial as to be amusing? Is it not a good deal like the fear of the woman who refuses to go downtown, because she is afraid to cross a congested business street?

Cesarean Section

Owing to the introduction of aseptic surgery, the cesarean operation is today performed much oftener than it was twenty-five years ago, and with a comparatively low mortality rate. So good have been the results, that it is a question whether it might not be employed still more frequently

than it is. There are difficult forceps-deliveries where the dangers both to mother and child are greater than they would be from cesarean section done early and while the mother yet is in good condition.

This operation also has been suggested, and to some extent practiced, in placenta prævia and in puerperal eclampsia. Judging from recent literature upon the subject, it would seem that the question still is unsettled as to whether the dangers of these two conditions are diminished or not by cesarean section. A sufficient number of cases has not been reported to settle the mortality rate under this new procedure. In eclampsia, at least, I should be inclined to doubt any advantage in the operation, not only because emptying the uterus does not always stop the convulsions, but, because in many instances they do not begin until after the delivery. Then, too, *veratrum viride* affords a means of control that seldom fails.

Pituitary Extracts

The discovery of the influence of the pituitary secretion on the uterine muscle is pituitary gland on the uterine muscle is one of the noteworthy events of the last quarter century. It produces contraction of the uterine muscle, although in a manner somewhat different from ergot. The latter acts mainly in the way of producing tonic contraction, while pituitary extract increases the frequency and force of the ordinary labor-pains. Like ergot, it is capable of doing mischief if given too freely or indiscriminately. There is no lack of evidence that the rapid delivery of the child, when induced by large doses, increases the danger of laceration of the perineum. If given when any obstacle to delivery exists, rupture of the uterus is a possibility. Pituitrin acts more decidedly in some patients than in others, and for this reason there always is a possibility of getting excessive contractions. This uncertainty has led me to use it less frequently of late. When a little extra force is needed for effecting delivery, I prefer to supply this by means of the forceps, the action of which I can control, rather than use a drug the action of which, when once it is administered, is beyond control. Still, there is no denying that where the pains are feeble and ineffective the action of pituitary extract often is brilliantly satisfactory. As a means of securing

and maintaining postpartum contraction, it is inferior to ergot.

Painless Labor

The problem of mitigating the sufferings of parturition has received considerable attention of late years. The solution of the problem was believed, by many, to have been reached about five years ago, when the much-vaunted "twilight sleep" was announced, to a waiting world, from Freiburg. This consisted in the combined use of morphine and scopolamine (or hyoscine) to the extent of producing complete anesthesia, or, rather, amnesia. The method was given a trial more or less thorough both in Europe and America; however, it has been pretty generally abandoned or else considerably modified.

Long before the sensational announcement from Freiburg, many of us had been using the Abbot combination of hyoscine, morphine, and cactin (known familiarly as H-M-C). I regard this as more satisfactory and safer than the complete unconsciousness of the so-called twilight sleep. So far as I can observe, there is no extensive demand on the part of childbearing women for absolutely painless labor. All that the great majority ask is, that suffering be relieved to a reasonable degree. And this can be accomplished by means of this mixture with perfect safety even in domestic practice. The close and constant supervision required in twilight sleep makes it impracticable for use anywhere except in hospital work. I have used the hyoscine-morphine combination for a little over ten years and find it very satisfactory.

The use of nitrous-oxide gas for rendering labor painless or nearly so has been tried to some extent. The results have been good, although the method is impracticable in family work, however well it may be adapted to hospital practice. It requires heavy apparatus and is expensive.

Puerperal Eclampsia

Some progress in the prevention and control of puerperal eclampsia has been made, although the work of the profession in general in this respect still leaves much to be

desired. The value of digitalis for controlling the albuminuria of pregnancy and of veratrum viride for controlling eclampsia is not as generally known as it should be. These two drugs are apt to be used too timidly to give the good results of which they are capable. With the general adoption of an intelligent use of veratrum viride and digitalis, there would be few cases of eclampsia, and fewer still would end fatally.

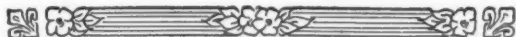
The Pulmotor

The invention of the pulmotor was hailed by many as a lifesaver in asphyxia neonatorum; however, its use virtually is limited to hospital work, and even there it is a question whether it has any advantage over the old method of mouth-to-mouth insufflation. The great advantage of the latter is, that it can be applied instantly and requires no apparatus. This is very important when we bear in mind that a few seconds may make the difference between life and death.

The same objection holds against the attempt to aspirate mucus from the trachea by means of a catheter. It loses valuable time. Anyone who has ever tried to intubate the larynx in diphtheria knows how difficult it is to get into the rima glottidis. And, the procedure is not needed. If a newborn child fails to breathe, it is not because the trachea is filled with mucus, but, because the reflexes are suspended; and the pressing need is, to excite those reflexes as quickly as possible. To do this, the child should be held head down for a moment, its pharynx wiped out with a gauze-covered finger, and the insufflation applied steadily and persistently. This will revive any child not absolutely dead.

Summary

Most of the standard obstetric procedures of twenty-five years ago are in use today with but little modification. Our fathers had builded well. They were conservative and their work has stood the test of time. The greatest need of today is, an intelligent conservatism free from bigotry, yet, progressive without being radical.



The More Recent Conceptions of Narcotic-Drug Addiction

By W. R. WALLACE, M. D., Memphis, Tennessee

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DURING the twenty-five years in which CLINICAL MEDICINE has been preaching the doctrine of rational therapeutics, most radical changes have occurred in professional opinion with reference to narcotic-drug addiction. Prior and up to 1901, narcotic addiction was classified either as a neurosis having some mysterious and undemonstrable nerve lesion as its pathology or was held to be a mere habit, a vice, a moral perversion, and without any pathologic foundation. These views were widely promulgated and universally accepted, and are still adhered to by certain classes of physicians, although the large majority have accepted the more recent, more rational, explanation.

Those who held that there was present some structural pathology, which, when discovered, would account for the manifestations incident to the habitual use, as well as the disuse, of narcotic drugs, strove in vain to find such a lesion. Being unable to prove its existence, they advised symptomatic treatment and, as a rule, made the prognosis unfavorable.

Those who classed narcotic addiction as a mere habit, a vice, a moral perversion advised either the immediate or the rapid withdrawal of the drug, in connection with complete restraint of the patient; since, however, these means usually failed to cure, they held out no hope for the restoration ("reformation", as they called it) of the victim of those enslaving drugs.

Eventually, in the year 1899, Dr. Geo. E. Pettay, being convinced that the currently held view of drug-addiction was erroneous, undertook an independent clinical study of this class of patients; and the result of this investigation, based upon the treatment of 150 cases, he published in *The Therapeutic Gazette* for October, 1901.

The conclusion reached by Doctor Pettay was, that narcotic addiction is neither a mere habit, a neurosis nor a vice, but, that the person thus addicted is suffering from a real disease—not one, indeed, depending

upon a structural pathology, yet, a disease, nevertheless; that, in fact, it is an intense and complex toxemia. And experience soon led him to announce that narcotic addiction is the most certainly and most readily curable of all the chronic ailments. In the *Gazette* article referred to, Doctor Pettay not only announced the pathology of drug-addiction, but, gave the profession an outline of treatment constituting a rational basis for handling such cases. Thus, for instance, he wrote:

"While it is true that many nervous manifestations attend the use of narcotics, and especially the disuse of narcotics, by one habituated to their use, still, the condition is not in any sense a true neurosis, but, is purely and solely a toxemia, and, as such, it belongs to the field of internal medicine, and not to neurology". And he reached the conclusion that "the essential pathology of narcotic addiction is, a toxemia of drug-, auto-, and intestinal origin", and he announced his belief that, "if the patient could be made *cell-clean*, that is, if every cell and tissue of the body could be entirely freed from toxic matter, there would be no nervous manifestations or suffering incident to or following the withdrawal of narcotics from a habitué." He admits, that "it is impossible to cleanse perfectly the system of a drug-user, so long as any quantity of the drug is taken", but, adds that "the nearer this ideal condition is approached, the less suffering accompanies or follows the withdrawal of the opiate".

Having reached these conclusions as to the proper classification and the pathology of narcotic addiction, Doctor Pettay announces the principles involved in his new treatment, as follows:

Doctor Pettay's Principles Restated

"At least six of the most troublesome and dangerous complicating symptoms [of drug withdrawal] have their origin in a perverted function, namely, deficient excretion. These are, intestinal colic, nausea, vomiting, la-

bored and deficient heart action, and collapse. By thorough elimination, these may be prevented altogether, and a number of the other symptoms of nervous and mental origin greatly modified, if not avoided.

"The motor function of the bowel is the function most impaired by the effects of opiates. Purgatives, secretory stimulants, as ordinarily given, which excite intestinal motion by reflex action, do not sufficiently restore that function to bring about effective emptying of the intestinal canal of a drug-user.

"In order to empty the intestinal canal of a drug-user direct, positive stimulation of the motor centers is essential, strychnine being the most suitable agent for this purpose. Since in narcotic drug-users all the nerve-centers are profoundly impressed with the narcotic, resulting in extreme lethargy of intestinal motion, larger than ordinary medicinal doses of strychnine are required to overcome this lethargic state and excite efficient peristalsis.

If the motor activity of the bowel be efficiently induced and maintained by direct stimulation of the motor centers with strychnine, no larger quantity of the glandular stimulants is required promptly and fully to empty the intestines of the drug-user than in those not using the drug.

"If free peristaltic action is excited while the system is still under the sedative influence of morphine, little, if any, distress occurs and the intestinal canal can be thoroughly and promptly emptied. Strychnine, if given in sufficient doses, will excite active peristalsis, notwithstanding the restraining effects of the opium.

"When the intestinal canal has been thoroughly cleansed and portal engorgement overcome, morphine or other narcotics can be at once withdrawn from an habitué, without danger to life and without the occurrence of shock, diarrhea, colic, vomiting or the slightest appearance of collapse. By uniform and proportionate stimulation of all of the functions concerned in the evacuation of waste, the system can be thoroughly cleansed of toxic matter without exhausting the patient's strength or otherwise taxing his vital energy.

"A general hyperesthesia follows the withdrawal of opiates from an habitué, this being the natural reaction from the state of chronic anesthesia to which the drug-

user has been accustomed. This extends to all of the functions of the body, mental as well as physical.

"The severe suffering incident to the abrupt withdrawal of opiates, after thorough elimination has been carried out, has a natural limit of a few days' time. This suffering, severe as otherwise it would be, can be obviated and these days passed in comfort by the discreet administration of scopolamine.

"The therapeutic use of scopolamine, for the time it is required in these cases, does not in any way perpetuate the desire or necessity for the use of an opiate. While it relieves pain, induces sleep, and overcomes those distressing symptoms of nervous origin that follow the withdrawal of morphine, its action so opposes the effects of the opiate that, instead of perpetuating the effects of the morphine, it stimulates the centers which have been benumbed by that drug and shortens the time during which its secondary effects would be manifested.

"When the patient's system has been thoroughly cleansed from toxic matter, the drug withdrawn, and the patient prevented from suffering, by means of scopolamine, for from two to three days, no craving or desire for the drug remains; abstinence-symptoms such as ordinarily follow the withdrawal of opiates are obviated, and the patient is brought to a condition in which he can pass his time in comfort, eat heartily, and sleep from four to six hours out of each twenty-four; and this insures safe and rapid convalescence.

"The period of convalescence during which the patient must be kept under supervision also is considerably reduced, although it varies greatly in different individuals. The absence of that train of nervous symptoms, the ability to sleep naturally and to eat heartily, and the improved digestion and assimilation, by which the patient rapidly gains in flesh and strength, lessen the liability to relapse almost as greatly as this curative plan of treatment lessens the dangers and sufferings while under treatment."

Petty's Position Is Sustained

These findings of Petty have been confirmed by Jones¹, Crowell², McKay³, Case⁴, Bishop⁵, besides other investigators, and his writings have been extensively quoted. In

1913, The F. A. Davis Company, of Philadelphia, published his complete work, under the title "The Narcotic-Drug Diseases and Allied Ailments," to which reference here is made.

During the past twelve years, the writer has treated about 3,000 cases of drug-addiction according to the principles outlined by Pettey and has fully confirmed the findings of that investigator.

In November, of 1901, Lott⁸ published an article entitled the "Cure of the Drug-Habit Without Pain," in which he advocated the free administration of hyoscine, which he styled a specific cure for morphinism. Hare⁷, following Lott's teachings, reported on the treatment of 6 cases of narcotic addiction with what he called "remarkable results." The endorsement of Lott's method by Hare and his advocacy of the use of hyoscine, which, he said, could be used in massive doses for days at a time without harm, led many to undertake the treatment of drug-addicts by what soon became known as the "hyoscine-treatment"; but, the excessive and indiscreet use of this remedy soon brought that treatment into disrepute, and it is now practically obsolete. It was based upon a false idea as to the nature of addiction, and, since it did not remove, correct or overcome the pathology, the patient was in as bad, if not worse, condition after the treatment than he was before it was begun.

A Criticism of the Towns-Lambert Method

In 1909, Lambert⁹, published an article entitled "Obliteration of Craving for Narcotics," in which he announced the discovery, by a layman, of what he termed a "specific" for the cure of drug-addiction. The composition of this "Towns-Lambert" remedy is as follows:

| | |
|-----------------------------------|---------|
| Tincture of belladonna | |
| (old formula) | 2 drams |
| Fluid extract of hyoscyamus..... | 1 dram |
| Fluid extract of xanthoxylon..... | 1 dram |

The initial dose of this mixture is given as from 6 to 8 drops, repeated at intervals of one hour, and to be increased by 2 drops every six hours, until the maximum of 16 drops is reached. This course is to be begun as soon as the bowels have acted from a dose of compound cathartic pills and blue mass previously taken. The remedy is to be continued, and the cathartic to be re-

peated at frequent intervals until a liquid green stool, composed of bile and mucus, occurs, which is the signal for discontinuing the treatment.

In the series of 28 cases reported by Doctor Lambert, the average length of stay in the hospital was eleven days. While these patients were discharged as cured, no one who knows what is involved in the cure of a drug-addict would consider them cured. Doctor Lambert's high professional standing led many to give weight to his announcement of this new treatment and to employ it in the treatment of their drug-patients; however, the results were very disappointing. These unfavorable results, together with the fact that a few months later virtually the same article by the same author appeared in a popular magazine, soon led the profession to become suspicious and to drop this treatment, not, however, until much harm had been done to the helpless victims of narcotics.

Federal and State Laws

In the matter of legislation for restricting the sale of narcotics, it can be said that much good as well as much harm has resulted from these laws. The federal law, known as the Harrison Law, has greatly reduced the sale and use of narcotics; but, it also has sent many of these victims to an untimely grave. This law was molded by those who held narcotic addiction to be a vice rather than a disease, and its provisions cut off the drug supply from persons addicted without making provision for the treatment and cure of these really disease-stricken people. As a result, many of them went into collapse from being deprived of their accustomed drug, and from this to an untimely grave. The purpose of this act was, to control, restrict, and finally abolish the abuse of narcotics. While it has done much to accomplish this result, this heroic measure, so destructive to life, can not be justified.

Most of the states have passed laws for the control of the sale of narcotics and for the restriction of their use, but, New York seems to be the only one that has in its laws recognized narcotic addiction as a disease and provided for the care and treatment of those victims before they are deprived of their needed drug.

Following the teachings of Pettey and Bishop, the state of New York has passed

real 20th-century laws for governing the prescribing, sale, dispensing, and use of narcotics, as well as for the care and treatment of persons addicted to such drugs. It is to be hoped that other states will follow the lead of New York, and that no laws will hereafter be passed that deprive a narcotic habitué of the drug of his addiction, without recognizing the fact that he is suffering from a real disease, and without providing for the humane care and treatment of such persons.

Narcotic addiction is a curable disease,

and, when once the patient is really cured, when he is given a fair chance, his permanent restoration is fairly certain.

¹J. Ben Jones, *American Medicine*, Vol. 4.

²S. M. Crowell, *Charlotte Medical Journal*, *Virginia Medical Monthly*.

³Jno. H. McKay, *Denver Medical Times*, March, 1908. *Texas Medical News*, August, 1912.

⁴C. L. Case, M. D., *Medical World*, 1909.

⁵Ernest S. Bishop, *New York Medical Journal*, *American Medicine*, *American Journal of Surgery*, *Interstate Medical Journal*, 1914, 1915, 1916.

⁶M. D. Lott, *Therapeutic Gazette*, November, 1901.

⁷Hobart A. Hare, *Medical News*, 1902.

⁸Alexander Lambert, *Journal American Medical Association*, September 25, 1909.

The Third Arm

A Study of Pathological Tissues

By B. G. R. WILLIAMS, Paris, Illinois

EDITORIAL COMMENT.—This is the third article by Doctor Williams concerning the possibilities of laboratory investigations as a fertile aid to diagnosis. The preceding papers were published in the issues for August and October of last year.

SURGEON Sampson believes in routine tissue studies, and he sees to it that they are carried out in all of his excised tissues, Surgeon Simpson does not.

Many surgeons are now insisting upon routine histological studies of their material; and thus they are able to check up their clinical diagnoses and complete their records.

These data are of great value, not alone in avoiding possible legal troubles, but, in making these surgeons clever diagnosticians.

Often—usually—the report will coincide with the clinical opinion ventured. But, it does occasionally happen that the pathologist will find a condition not suspected by the surgeon. Daily verifications and challenges of diagnostic opinion prove of greater worth than the haphazard method of concluding with, "Oh, well, this tissue apparently is tuberculous," (or whatever it be), and then throwing it away and following up the matter no further.

We all start even; and our fitness to practice medicine is determined by fixed standards. Diplomas all look about the same and do not vary in weight. But, after ten or twenty years, the fact becomes apparent, that, while some of us have succeeded, others have succeeded only in failing. Even the layman—and surely, the general practitioner who refers his surgical

work to specialists—may distinguish between the surgeon and the operator.

It is an observation that the man who truly succeeds is he who is persistently progressive. It is a fact that the man who calls upon the precise aids of medicine succeeds. It certainly is not true that laboratory-work alone will insure success, still, it is one of those contributing factors in the making of a great diagnostician. For, the successful physician no longer is the purveyor of pills or the expert manipulator of the scalpel, but, he who understands pathology. And it is becoming so more and more.

Surgical pathology has made surgery. The examination of excised anatomical material has contributed more to medicine than has the necropsy. Irrespective of his duty to the patient, the surgeon owes it to himself and his future to be persistently progressive.

Preparing the Specimen

The average tissue-pathologist is a prohibitionist. As a tissue-preservative, formalin has replaced alcohol. A 10-percent formalin solution is a powerful and beautiful fixing agent; while alcohol dissolves out the contents of the red blood-cells, renders some tissue-elements less distinct, and leads to stained pictures that are not nearly so clear and definite as

those given by formalin. Moreover, tissues should never be submitted to the pathologist in salt solution, carbolic acid, boric acid, iodine, lysol, mercury bichloride, and so on; and, when submitted without proper preservation, they dry out or rot.

Very large pieces of tissue may be incised here and there (carefully so that relations be not lost); and this will aid in the formalin penetration and thus the work of the pathologist is hastened.

Selecting the Specimen

Avoid clots, sloughs, caseated areas, and such, as these are structureless, unstainable, and can not be examined with diagnostic profit. Solid living tissue should be secured, if possible. A tissue need not be normal to be living; tumors, inflammations, and so on are all living processes, and by virtue of this fact can be diagnosed by the tissue-man. Dry, stringy, friable or cheesy materials easily separated from a lesion are, as a rule, quite structureless, and the pathologist cannot even guess what the process leading to their death "may have been."

Excise the specimen from the more solid portions of the lesion. When possible, it is well to include the line of transition between tissue apparently normal and that diseased. This applies especially to tumors, as thus the pathologist is able to demonstrate malignant infiltration, if such be present.

If specimens are to be sent to two pathologists, give each a fair share. Do not send one a portion of normal tissue and the other some material that manifestly is pathological, or else their reports can not be expected to agree.

Instructions

It is not always necessary, but, often is advisable to include with the specimen a record of the source of the tissue (site of lesion), as also the tentative diagnosis. Many surgeons believe that this will influence the judgment and opinion of the pathologist. It will not, for, the latter is always on the alert to challenge a clinical diagnosis. This is the modern spirit of diagnosis; it also is seen in the policy and habit of the prosecutor (another true pathologist), who is ever ready to find something the clinician did not suspect.

At any rate, it is always well to include information as to the site of the lesion. A

certain growth which may be normal or only semipathological in one portion of the anatomy would be strictly malignant found elsewhere in the body. I could give many instances, but, will mention especially thyroid tissue in some portion of the body other than the thyroid region, and polyps in the external auditory canal rather than in some other site.

Mammary and Uterine Tumors

Malignant tumors of the skin, lips, tongue, etcetera, all have about the same appearance under the microscope; this, though, is not true for cancers of the breast and womb. This fact is important, although the practitioner will not be interested in the technical variations. It does argue, however, that the man who merely sees a few cancers from these organs and memorizes their microscopic appearance will not get very far in differentiating malignant and benign growths of the mammary gland and uterus. This applies more or less to neoplasms in all of the viscera, where decision must be made, not upon classical appearances, as presented in texts or the teaching-laboratory, but, upon proving vegetative properties of the cells, invasive designs, and other facts, which often necessitate considerable study, even by an experienced laboratory-man. I recall certain types of cancer in these organs, observed by me several years ago and indelibly impressed upon my mind, for which I have been on the lookout ever since, without ever having met them again. Others have resembled them, still, there was no exact duplication. There always was some important variation either in the type of the cell or in the general scheme of the growth.

Some time ago I looked over some sections of mammary gland given to a student in his medical course, and among them I found several that varied considerably in detail from any I had ever observed although I have examined many hundreds during the past years. This point is rarely taken into consideration; and the surgeon often fails to realize that in every case the question of malignancy must be solved, not by reference to classical pictures, but, by a searching study into the type and relations of the suspected elements. There are some general classifications that are of some value, but, there are perhaps

thousands of possible varieties of mammary carcinoma.

The same is true with reference to uterine cancers, and I have studied several types of stratified squamous-cell carcinomas of the cervix, a type ordinarily regarded as showing little variation. However, the greater variation occurs in the so-called cubic-cell types, in the adenocarcinomas, and in the malignant adenomas—certainly, there must be hundreds of types, and the resemblance is not close. Formerly I saved these specimens, and it occurred to me to mount some of them alongside of sections of normal uterine tissue and sell them to other pathologists as contrast reference mounts. But, the method was a failure. It would have been as plausible to have photographed a well person and one having typhoid fever, and mounted them on the same cardboard and said: "Here is a normal person and a typhoid-case. If in the future you are called upon to make a diagnosis, mercy refer to this card, and the question will be solved." For, while the pictures could be contrasted and were very interesting, a survey of my collection showed that I might actually mount dozens of types of uterine cancer, all of which were classical enough, and yet the next cancer met by the pathologist using the mount might hardly resemble any of the sections. I abandoned the scheme, although I, a tissue-man, and at least three others, upon first thought had regarded it as a brilliant one. *The diagnosis must be solved by actual study of each neoplasm, and comparison with contrast mounts or textbook-pictures is a worthless and dangerous method.* It is certain to mislead.

Degrees of Malignancy

The pathologist may be able to approximate a prognosis. He may be able to determine by the findings whether a growth is very malignant, fairly malignant, semi-malignant, occasionally malignant, or non-malignant. Of course, in doing this, he must keep in mind many factors, clinical as well as microscopical; and if he is expected to venture a usable opinion, he must know the site and the history of the lesion, as also he must understand the microscopical picture, so as to make his opinion worthy of record. The surgeon who establishes a plan of cooperation with

his tissue-man, instead of playing a game of "I know what it is; you find it out," will profit in the end.

This advice holds especially in regard to tumors of the gums, skin tumors, and growths in the intestine, rectum, bladder, nose, and ear, and so on. It applies especially to bone tumors. I recall one cancer (scirrhus of the sigmoid colon), with a history of growth of perhaps twenty, but, undoubtedly fifteen years, whereas most cancers of the bowels are very malignant. A very nasty tumor, microscopically speaking, of the appendix is usually only slightly malignant, clinically speaking; however, the pathologist could scarcely estimate its degree of malignancy when he did not know that it came from the appendix rather than the sigmoid colon. There are many other instances where clinical consideration and site are vital to the question, and, unless these are named by the surgeon, the tissue-pathologist should be reluctant to give an opinion as to the degree of malignancy, likelihood of secondaries, and prognosis in general.

Challenging a Clinical Opinion

It is well for the surgeon to include with the tissue specimen his opinion about the nature of the lesion. It is not merely the business of the pathologist to verify this diagnosis, but, to attempt to pick it to pieces, if such is possible. It is his duty to look for other lesions. It is his duty to look for causes. It is his duty in the case of each cancer section, to attempt to solve the question of cancer. In fact, it is his privilege to make each tissue examination rather tedious for himself, even though the very first field give a diagnosis suitable to the surgeon; for, in tissue-work, the pathologist must continually become a better diagnostician, even as the surgeon must improve his diagnostic ability. There is a tendency to overlook this fact.

The rapid tissue-man is not the safe tissue-man. Suppose, for example, the first sections from a suspicious breast lesion show benign adenoma; the pathologist's duty and task are not yet done. He should examine many other sections from other portions for evidences of malignant changes in this adenoma. I know of tissue-pathologists who take a single section from the material, stain it, examine it, then

venture an opinion. Usually, I will grant, they get the diagnosis exactly correct, but, there is a source of error; and, in routine work, this source of error makes itself manifest now and then. Very often, indeed, have I examined a dozen sections and found nothing even suspicious of malignant neoplasm; then I came upon a section that was absolutely cancerous.

I have asserted that the very best pathologist will get up against it now and then; and, from observation, I feel justified in including professors of pathology as falling into the class of best pathologists. Occasionally a pathologist who is sincere will be unable to venture a definite opinion or will finish with half a diagnosis. The "expert" pathologist who diagnoses rapidly and without difficulty is a dangerous consultant—I have seen it again and again. It is the all-around specialist who says "Let me peep at it—no cancer in that" who leaves misery in his path. I have seen a tissue diagnosed as tuberculous; when a survey of some other section would have revealed the presence of the ray-fungus. I have witnessed the "two-minute" method applied to a growth of the throat, and two months later the diagnosis by the family physician changed from papilloma to carcinoma. The pathologist should never "grandstand." Neither the surgeon nor the pathologist is infallible, and both do err occasionally; however, it is the flip-pant type of either that gets the species in bad.

Neither should assume an antagonistic attitude toward the other, but, *the two must work together*. However, because the surgeon suggests a diagnosis of cancer, is no reason why the pathologist should fail to challenge the clinical opinion, providing the pathological picture be different. In turn, the surgeon is not duty-bound to accept the dictum of the pathologist, but, should send him more of the material or submit a specimen to another tissue-man; and he has a perfect right to do this. After all, the decision is of more importance to the patient than to either consultant, although I do not agree that it is unimportant to the physician himself.

Usually the pathologist will verify the clinical diagnosis. Now and then he is

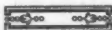
not justified in doing so. In medicine, we must be brave; and it takes a brave pathologist to challenge the opinion of one of his best clients; still, that client, if worth having, will appreciate the sincerity of the man doing the tissue-work.

Conclusions

Medical literature contains but little on the relations between surgeons and pathologists. I have tried to view the question from the two angles, although I am writing from the standpoint of the latter. More and more the surgeon is coming to demand this work, and, if he and the pathologist can do "team-work," the two together can throw more light upon surgical pathology and diagnosis than can many of the teaching laboratories. Actually, the man who makes tissue-pathology his life's work discovers many wonderful truths every day, and has a better knowledge of the cancer-question than the worker in the heavily endowed cancer-research-laboratory; he sees cancer at its daily activities and in its various phases. They work together, yet, not in harmony. The cancer-cell has solved its role and is merely carrying out its program. He at the ocular observes that program, but, he searches for the reason; aye, more than that, he has learned the reason. The research-man never will learn it. The diagnostic tissue-man may never dare suggest it, for fear of ridicule; still, the knowledge will make him a valuable worker in his place in medicine. He has been forced to devise methods regarded by the research-worker as impossible.

The most valuable research-worker today is the diagnostic tissue-pathologist; for, he is not a mere motive power for a microtome—his is the problem of diagnosis in every piece of work, and, *as in every other branch of diagnosis*, he is continually up against it. He dare not fail in a single instance; and, yet, it does happen that he fails now and then, even as does his colleague, the surgeon, who is also entrusted with diagnosis and human life.

The closer the cooperation, the less the number of errors. The closer the cooperation, the better the surgeon and the pathologist. The closer the cooperation, the better off the patient.



Early Cancer Diagnosis

By GEORGE O. JARVIS, M. D., Ashland, Oregon

AN editorial in *The New York Medical Journal* for June 30, 1917, emphasizes the need of a method for early diagnosis in cancer. Dr. Albert Abrams, of San Francisco, has devised and perfected such a method, which is accurate and which will give a definite answer in the very earliest stage, or in any other stage, of cancerous disease.

In cancer, the matter of early diagnosis is extremely important. Authorities agree that only early and radical removal offers a fair prospect of freedom from recurrence. In external cancers, it, naturally is possible to make a diagnosis earlier than if the growth be located internally. In gastric cancers, the diagnosis must await the appearance of "a cancer test"; but, this implies a fairly advanced carcinoma.

Reference to this method of diagnosis will be found in *The International Clinics*, vol. 1, 27th series, 1917, and also in the "Reference Handbook of the Medical Sciences," 7th volume, last edition.

The diagnostic reaction is based on these facts: (1) that the electrochemistry in normal tissues differs from that in abnormal tissues; (2) that energy from the tissues can be conducted along an insulated wire; and (3) that the ganglion-cells of the spinal cord, the peripheral ganglia or the parenchymatous cells themselves of the various organs will respond to energy conducted from an anlage of special physiologic activity (such as the beating heart) or from an anlage of pathologic activities (such as cancer node or a focus of infection).

There are great difficulties in the way of devising an automatic and mechanical method for registering the very slight differences of potential that exist in the tissues. Some five or six years ago, Doctor Abrams found that the human viscera constitute a wonderfully delicate mechanism for registering these minute differences of potential. In the earlier methods by which these principles were applied the energy was conducted from the diseased anlage directly to the region of the stomach in a healthy test-subject and the stomach

alone was employed as a registering mechanism.

This method permitted of an accurate diagnosis of cancer; but, not as readily, rapidly, and accurately as the present method. Neither did it as easily and accurately differentiate between different infections, such as tuberculosis, syphilis, streptococcic or colon-bacterial infection. The later method employed by Doctor Abrams is, to conduct the energy along an insulated wire from the diseased tissue,

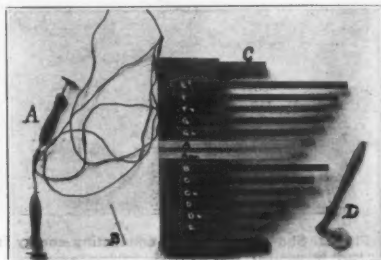


Fig. 1. Showing armamentarium.
A—Conducting wire.
B—Small bar magnet.
C—Xylophone of wood.
D—Piano hammer for xylophone

upon the back of a healthy test-subject, to a point located between the third and fourth thoracic vertebrae. In this way, the energy affects the ganglion-cells of the cord (presumably) and certainly affects the blood supply and condition of "tone" of the viscera through the splanchnic nerves. (Fig. 2-a).

Similar results are to be obtained if the electrode be applied to the test-subject over the second lumbar vertebra, though in this case the visceral reactions will not appear in the same localities as is the case when the energy is conducted to the level of between the third and fourth thoracic vertebrae. (Fig. 2-b.) This method is described in *The Journal of Physico-Clinical Medicine* (volume 1, No. 3, page 20).

A most remarkable fact is, that changes in the tissue tone and in the percussion note will be produced in the viscera at different positions according to the disease in the tissue under examination. For

instance, if cancer be present, an area of dullness of about 4 cm. in diameter will appear just below the left costal border and about 5 or 6 cm. from the middle line. This change in percussion note will be readily appreciated, because its range is from two to four notes of the musical scale, varying according to the intensity of the disease in the patient and the activity of the reflexes in the test-subject.



Fig. 2. Showing method of conducting energy from patient to healthy test subject.

The locations of the dullness produced by certain of the different diseases under consideration will be seen in Figure 3.

At the same time that the percussion tone rises, a sense of increased resistance will be communicated to the finger employed as a pleximeter and the plexor finger also will feel a difference. This difference is similar in kind, though less in degree, to that experienced when percussion is executed first over the stomach and then over the liver.

These reactions show themselves in the organs by change of density of shape and of percussion note. Alterations in the blood pressure may also be demonstrated in a test-subject if the energy is conducted in an appropriate manner.

In performing these reactions, it is well to see to it that the test-subject stands facing east or west—not north or south—as the “tone” of the viscera is increased when facing in the magnetic meridian. This interesting fact gives a clue to the mechanism through which birds, animals, and some human beings are able to find

their way without the aid of a compass. It seems that there is a different sensation throughout the body when the animal faces along the magnetic meridian (that is, toward the magnetic pole), while at the same time there is a rise in the percussion note over the various hollow viscera, including the lungs, of from one and a half to two and a half tones as measured on the musical scale. Evidently, the vagus tone is increased when an animal faces parallel to the magnetic meridian. (Fig. 2.) The splanchnic electronic reactions are more marked if the test-subject is “grounded” by standing on a metal plate connected with a water-pipe or something of the kind. Percussion of the abdomen is to be performed while energy is being conducted from the diseased area (Fig. 4).

The visceral reactions are present in patients in whom there is cancer or in whom the various infections are present, and they may usually be demonstrated in the patient's own person without the use of an intermediary, if the patient is not too fat. The test-subject is employed, because the lungs and abdominal areas of



Fig. 3. Location of dullness produced by certain diseases.

healthy persons are normally resonant and tympanitic. Thus, one may compare the percussion note heard before and after the reaction has been elicited, causing the alteration to be more readily appreciated.

The method of producing the splanchnic diagnostic reactions is shown in the photographs. In Figure 1, the very simple apparatus employed is illustrated. The

wooden xylophone and hammer (c and d) are merely aids to the ear, and are not essentials. The small bar magnet (b) is not absolutely essential, but, is of assistance in determining the polarity of the energy under examination; though this

than is possible when the percussion strokes are executed in rapid succession. This demand is based upon the same fact of "fatigue of attention" as is the direction not to look at the colorimeter more than two or three seconds at a time when

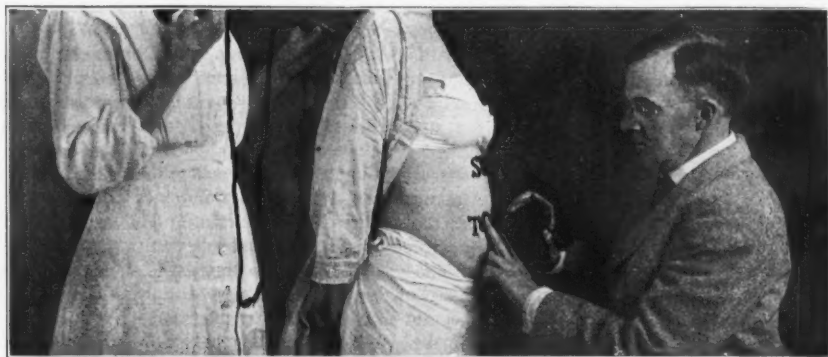


Fig. 4. Showing method of percussing abdomen.

may be determined by facing the test-subject either north (to dissipate — energy) or south (to dissipate + energy). The aluminum electrode-terminals on the insulated conducting wire (d) are employed; and they are equipped with wooden handles, largely as a matter of convenience.

The writer employs a kind of wooden xylophone (Fig. 1-a), which consists of a hollow box with a number of sticks glued thereto, as a means of aiding the ear to measure the change in the percussion note. The range of the xylophone is the octave of the middle register beginning with F. One executes percussion over the abdomen before conducting the energy and decides with which note of the scale the percussion tone of the viscera most nearly coincides. Then conduct the energy and again decide with what note the tone now obtained most closely corresponds. By this means, differences in resonance are easily compared.

In executing percussion of the abdomen, it is well to use light but marked staccato blows and to make not more than one stroke every second. The common practice of making a number of rapid double strokes confuses the ear. The interval of time here suggested permits of more accurate perception of the tone differences

making an estimation of the hemoglobin by the colorimetric method.

One, thus, will have a sort of "tone-measure" at hand. A piano or other musical instrument may be made use of to determine the differences in percussion tones. The writer's personal preference, however, is, for a violin; as with it one may obtain precisely the note of the viscera under examination—not an approximation, as usually is the case if a fixed scale be employed. The difficulty with the violin is, that the quality of the tone does not correspond to the quality of the percussion note of the viscera, while the tone of the wooden xylophone does approximately correspond thereto. If one is so fortunate as to be able to appreciate absolute pitch, there will be no necessity for any adventitious aids.

The result of this conduction-test can be checked up by the fact that the vibratory rate of the energy from carcinoma is 30 and by the other fact that the visceral reaction may be immediately dissipated by pointing the south pole of the small bar magnet to the same point of the spine while the reaction is being made. This proves that the energy from carcinoma is of positive polarity. The vibratory rate is measured by an apparatus especially adapted to that purpose by Doctor Abrams.

If syphilis be present, it will be necessary to conduct the energy from certain definite areas of the patient's body; namely: from the region of the liver, the spleen or the middle thoracic vertebrae. In a case of congenital syphilis, a similar reaction will be produced by placing the patient's electrode over the eyeball, thus permitting differentiation between the congenital and the acquired forms of syphilis. In the congenital, but, not in the acquired form, another dull area will be found between the symphysis pubis and the umbilicus.

In the diagnosis of syphilis, concomitant Wassermann reactions were made; but, the Wassermann reactions were not positive in every case in which the electronic tests of Abrams showed the presence of syphilis and in which the clinical history and therapeutic results showed beyond reasonable doubt that the Wassermann reaction was at fault.

By means of this method the writer has made thirty diagnoses of cancer before operation, and these were fully substantiated by submitting the excised tissue to one or more pathologists who had no knowledge whatever of the methods employed for diagnosis or of any previous history of the patient; the personal equation thus being entirely excluded.

The writer has experimentally verified this diagnostic method by utilizing as test-subjects patients operated upon for various abdominal difficulties, and he proved by direct observation that there is an overfilling of the blood-vessels of the area over which the percussion note was found to have been raised when the energy from cancer-tissues or blood from infected patients was conducted to a point between the third and fourth thoracic vertebrae. This local vasodilation probably accounts for the change in the percussion note.

The maneuvers did no possible harm to the patients and were done only with the consent of the patients undergoing operation, for the most part under infiltration (paravertebral) or spinal anesthesia, although sometimes under colonic (ether-oil) anesthesia.

The test was performed by using the patients under operation as test-subjects, just as would be done under other circumstances; only with the test-subject on the operating-table instead of standing

erect. The "patient's electrode" was brought into proximity with a bit of cancer-tissue, a tuberculous focus, a few drops of blood from a syphilitic patient or from a patient with streptococcal infection, as the case might be. The receiving electrode was held in place on the spine, between the third and fourth thoracic vertebrae with adhesive plaster.

The dilatation thus observed approximated a 75 percent increase in the caliber of the blood-vessels in the area in which dilatation occurred and was so marked that there could be no doubt but that dilatation did occur. At the same time, the percussion note over the dilated area rose to approximately the same extent as would be found in executing the test under ordinary circumstances. Both vasodilatation and dullness disappeared within three or four seconds after the receiving electrode was removed from the cancer or the blood from an infected patient; that is to say, in the time required for the viscus to execute its rhythm.

The information regarding electronic reactions of Abrams is being introduced to the medical profession at a time when the electrochemical conception of cellular activity is beginning to make headway. Without a clear idea of this electrophysical concept of physiologic and pathologic activities, these electronic reactions are difficult to comprehend, even though comparatively simple in technic.

By means of these electronic reactions, Dr. A. W. Boslough, of Ashland, Oregon, and the writer have been able to diagnose eleven gastric and other internal cancers at a time when there was only the smallest macroscopic sign of a cancer in the removed specimen. When the specimens were submitted to one or more competent pathologists, who had no knowledge of the case, beyond being told the region from which the tissue was removed, a diagnosis of malignancy was returned, with one exception. In this case, one pathologist pronounced it malignant and another benign; but, the recurrence of symptoms after operation and the circumstances of the subsequent death of the patient left no doubt but that the growth was malignant.

Specimens in which a suspicion of malignancy might exist, both from the history and from the macroscopic appearance, but, which the reaction of Abrams showed to

be benign, invariably proved, on pathologic examination, to be nonmalignant. The subsequent history of those pronounced benign has shown, so far as the lapse of time permits final judgement, that the diagnosis of a benign process was justified. The clinical course of those in which the diagnosis of malignancy was made has furnished—except in those cases where complete extirpation was possible—the best foundation for the diagnosis of malignancy that had been made.

With regard to bacterial infections: The tests made by the writer have been upon teeth the roots of which were infected and in which radiographs were made to show the possible existence of periradical tissue changes possible to demonstrate by the x-ray; upon other streptococcic infections; upon tuberculous, and upon luetic patients. Of these tooth infections, there were thirty-two cases in which the examination was quite complete; that is to say in which x-ray plates were made, the electronic test performed, and extraction, with macroscopic and microscopic examination of the extracted teeth, done. Extractions of the suspected teeth

proved the accuracy of the diagnosis of streptococcic infection. It cannot be said that no cases went undiagnosed, because teeth which yielded no reaction were not extracted. Even many teeth which yielded the reaction but were amenable to treatment were allowed to remain in place. The subsequent clinical history of the cases of suspected focal infection strongly substantiated the findings of the electronic method.

Of the accuracy and delicacy of this method of Doctor Abrams there can be no question. Its simplicity leads some to overlook the necessity for care and accuracy, joined with considerable study and experience and an accurate knowledge of anatomy and the very latest developments in physiology. In the hands of those who lack accurate and delicate percussion, who are unable to distinguish variations in density of tissues (resistance) and in the percussion sounds or who are unwilling to devote time and labor to the investigation of the methods and perfection of the technique, the results will be unreliable; as would be the case with any other diagnostic procedure.

Cancer of the Rectum

By CHARLES J. DRUECK, M. D., Chicago, Illinois

Professor of Rectal Diseases, Chicago Hospital College of Medicine; Surgeon to Fort Dearborn Hospital; Surgeon to People's Hospital, Chicago.

MOST frequently, the seat of cancer of the bowel is either in the cecum, the sigmoid flexure, or the rectum. These are the places where the fecal matter rests the longest.

Cancer is the most fatal disease, and one of the most painful occurring in the rectum. Its cause here, as is true for elsewhere in the body, still is obscure, and the theories advanced are so much at variance that I am not prepared to venture any definite opinion. Likewise, statisticians and pathologists vary considerably in their conclusions. While carcinoma of the large bowel is quite common, the small intestine is but rarely the primary seat. The large bowel contributes about 95 percent of all cases of cancer of the intestinal canal, and of these the rectum contributes 80 percent and the colon 15 per cent. Cancer in general is

much more common now than formerly. Heredity seems to be a factor.

As regards the location of the disease, it is most frequently found about 3 or 5 inches up in the rectum, the lower limit being on a level with the internal sphincter, next in frequency at the anus (Williams estimates 3 cases at the anus to 40 within the rectum); and least frequently the growth is situated in the upper rectum, or sigmoid flexure. The region extending up from the internal sphincter not only is most frequently the site, but, also, cancers at this point most often are fatal; for, here the disease runs its course more rapidly and the lesion is more liable to accidents, owing to greater anatomical danger of obstruction.

Four different histological types of cancer are found at the anus or within the rectum; namely the epithelioma, the enceph-

aloid, scirrhus, and melanotic. All of these may become cystic, myomatous, colloid or ulcerated to such an extent as greatly to change their macroscopic and microscopic appearance. In their order of malignancy, the melanotic is the most fatal, next the encephaloid, then the epithelioma, and least of all the scirrhus growth.

Epithelioma of the Anus

At the anus, squamous, or pavement-cell epithelioma is the rule and is the same form of cancer that is so commonly seen on the lip. It originates in a preexisting fissure, ulcer, cicatrix, mole, wart, keratosis or chronic irritation, never on a normal uninjured anus. The tumor begins as a hard warty nodule just under the skin at the mucocutaneous border, and externally of the anus. This deviation of the tissue from the normal progresses rather slowly, and for a long while nothing is noticed but the little scales that are picked off as they continually form again, while beneath these scales or crusts are the ulceration and induration, these becoming greater as each succeeding scab is removed. Sometimes several distinct nodules are found about the anus. There is little or no tendency for the mass to extend into the rectum or into the outlying skin. It makes slow progress and does not ulcerate until late in its existence. A watery secretion exudes from the ulcer.

It is at this early scaly precancerous stage when the growth can most readily be removed; however, it is astonishing how frequently neither physician nor patient pay any attention to these conditions. If every anal irritation were removed, these epitheliomas would be very rare, if they occurred at all.

During the nodular stage of the cancer-growth, there is no pain, and also as the growth invades the perineum it is not sharply painful. Most patients speak rather of an uncomfortable feeling or a soreness. If the anus is eroded (which, however, is rare), the pain is similar to that proceeding from an irritable ulcer or fissure and it makes itself felt at the time when the growth begins to push through the mucous membrane. The cancerous ulcer bleeds or oozes easily when abraded but, the hemorrhage usually is slight. Epithelioma is distinguished from rodent ulcer by its nodular raised base covered with granulations. Microscopically, there are found the characteristic nests of squamous epithelial cells that

invade the lymph-spaces from the surface. The stroma is made up of fibrous and myxomatous tissue and is pretty well supplied with blood-vessels and inflammatory corpuscles.

Differential Diagnosis of Anal Cancer

Having contemplated the clinical picture of cancer at the anus, let us now differentiate it from other ulcerations of this region.

1. The *lupoid ulcer* begins at the same point, the ulcer, though, is clearcut and bands of cicatrization develop. Although these bands break down shortly after they form, fresh scars continue to form so that as a rule we can find some of them present. The ulcer spreads rapidly and sometimes proceeds to involve the whole buttock. The edges of the ulcers are not thickened. The base of the ulcer is soft, while beneath it there is a hard indurated mass. Examination of scrapings will usually show the presence of tubercle-bacilli.

2. The plain *tuberculous ulcerations* differ from the lupoid ones in that they first appear as anal fissures. They may be single or multiple, but, as they spread, they soon coalesce into one large ulcer. They are not painful. About the base of the ulcer there is a dense fibrous layer, which seems to limit the depth, and, so, the ulcer may surround the anus without reaching the connective tissue beneath the skin. It is a singular fact that any dense scar will act as a barrier to the spread of the ulcer—probably because of the lack of blood-vessels.

3. Simple *traumatic ulcers* at the anal margin differ somewhat from similar ulcers on other parts of the body, because numerous bacteria, habitants of the intestinal canal, abound in the skin of these parts. The ulcers are irregular in outline, with red, but usually sharp flat edges sloping down to the base of the ulcer. The base is crater-shaped, shows lots of granulations, and generally is discharging pus freely. This pus is foul-smelling, because of the many sudoriparous glands about these parts. The granulations bleed easily when wiped. The pain during defecation may be slight, and never is acute.

4. *Eczema* about the anus rarely is of the papular type, usually being of the erythematous form. In chronic cases, the skin becomes dry and brittle and cracks on stretching. Beneath the eczema, the skin is indurated, but, the hardening is in the skin, and not beneath it, as in cancer.

The lesion is wholly in the skin and moves with it. The ulcers, if present, are shallow.

5. In *rodent ulcer*, the edges are hard and well defined. The ulcer begins in the skin about the anus, not at the mucocutaneous border, as does cancer; it grows deeper, and has but few granulations, the induration about the base of the ulcer is only moderate in amount in contrast to the wide spreading induration about cancer.

6. *Irritable ulcer*, or fissure. The cardinal sign of irritable ulcer is the sharp, lancing pain at defecation. The ulcer is located in and conforms to the shape of a fold in the anal mucosa, and it extends up to the sphincter grasp; it is shallow and the edges are inflamed, sometimes even thickened but never indurated. If there is a tumor associated with the ulcer, it is most likely the sentinel pile¹ or the ruptured crypt of Morgagni.

7. *Warts* may appear at the anal margin, these, however, have no indurated base. Ulceration of these warts occurs only rarely and then usually in dirty subjects only.

8. *Chancre* most commonly is situated in the skin just outside of the anal folds, the ulcer resembling chancres anywhere else. It is superficial and circular in outline, but, the induration at the base does not extend beyond the edges. The border of the wound is red, while the center is dark-gray. Chancres here are not painful.

Cancers Within the Rectum

Within the rectum, the diagnosis of malignant tumors is more perplexing. I have seen a mass of impacted feces, and even a distended urinary bladder set a medical man worrying about having to do with a rectal tumor. Both these cases were, of course, easily cured under appropriate treatment, still, one encounters a lot of such cases that are not so easily diagnosed.

Intrarectal cancers belong to the columnar-cell growths and resemble the histological structures of the mucous membrane from which they grow. They are adenocarcinomas and closely resemble the benign adenoma; the glandular hyperplasia of the simple adenoma, though, is restricted to the mucous membrane and grows up into the lumen of the bowel, while the carcinoma permeates the submucous tissues and spreads out in every direction. Microscopically, the resemblance between the groups

of cancer-cells and the tubules of the normal gland is so great that the tumor may be mistaken for a benign adenoma, but, in the margin of the growth, quite atypical cells will be found.

These growths may arise in the cylindrical cells that line the crypts of Lieberkuehn and without any change in structure pierce the deeper layers of the rectum and cause metastatic growths. Microscopical inspection of sections of such a tumor does not determine its character as to benignancy. Although these growths may be benign at the start, the cylinder-cells very soon proliferate in some part of the mass, forming solid strings of cells. Then the goblet-cells disappear. However, not all adenomas here are benign at first. Sometimes the cells become polymorphous and fill up the alveolar spaces, when we have an alveolar carcinoma. The further the cancer-tissue is histologically removed from the normal, the more malignant it is.

These cancers arise above the sphincter and are easily differentiated from the squamous variety. Early in its existence the growth may appear pedunculated, and clinically it is impossible to distinguish it from simple adenoma, until the tendency toward a broad infiltrating base shows that it is malignant. Later, ulceration occurs and inflammatory changes are superimposed; all being aggravated by the irritation from the feces. These cancers vary somewhat in gross and microscopical appearance and also as to clinical history, according to the histological structure predominating in the makeup of the growth. Thus, although the same structural elements are involved, we find, respectively, either an encephaloid, scirrhus or melanotic cancer.

Encephaloid Cancer

The encephaloid cancer arises primarily in the crypts of Lieberkuehn, and it is enclosed in the connective-tissue capsule, which sends trabeculae into the mass and so divides it into lobules. The cells are large, round, and nucleated. It often is vascular, with large veins coursing through it and on its surface. In the interior, extravasations of blood give the tumor a soft, mushy feel, and it resembles brain-tissue in appearance—hence, its specific name, encephaloid. In other instances, it is spongy and shreddy, placenta-like. Later, a large amount of cancer-juice containing cells exudes on pressure, and, if dropped into water, it

¹The thickened wall of the anal pocket at the lower end of an anal fissure.

quickly diffuses, giving the whole a milky appearance. Paget considers this a valuable rough test in diagnosis. If seen early, the cancer is movable in the subjacent tissues, but, when seen later, it is soft and friable upon an indurated base.

These cancers grow rapidly and may fill the whole pelvis, involving the surrounding tissues, while secondary growths appear in neighboring organs. The glands are involved early, and, if the tumor is removed, it soon recurs, although considerable tem-

most malignant of the rectal tumors; they are so friable that they bleed upon the slight traumatism at an ordinary examination.

Scirrhus Cancer

True cancer, or scirrhus, is the slowest-growing and also the most frequently met with in the rectum. It arises in the subcutaneous connective tissue as a hard nodule beneath the normal mucous membrane and radiates out in various directions, principally, though, longitudinally up and down the rectum. These new extensions sometimes can be felt as hard bands or processes—claws—from which cancer receives its name. The cut tumor presents a cancer mass that is bluish-white and gristly with masses of fat and fatty tissue between the trabeculae, extending out into the normal tissue. As a rule, the center of the mass is degenerated and, if the tumor is cut, the center retracts, making a saucer-like appearance. This has been called the cancer-cup.

The scirrhus cancer is said to arise more frequently on the anterior wall of the rectum near the prostate gland, and infiltrates all surrounding tissues, eventually involving the bladder. A circular stricture, or collar, forms about the rectum, and as the lumen of the bowel is being closed an intractable constipation supervenes. Complete obstruction of the rectum may occur and even rupture of the gut, from fecal accumulations above the cancer, has occurred. Blood-vessels and nerves appear to be crushed out of the tumor, so, there is very little, if any, hemorrhage or pain. Ulceration comes on late in the scirrhus cancer, and, as there is very little absorption, or toxemia, the cachexia comes on late, also.

The diagnosis of scirrhus cancer is based upon its hardness and contractility; still, its history often is required to make possible differentiation from simple fibrous stricture of the bowels. The latter may exist for years, without any other symptom, perhaps, than the intractable constipation. Kelsey reports a case of dysenteric diarrhea that resulted in a stricture and presented a typical clinical picture of scirrhus cancer, but, had existed for eighteen years. Histologically, the scirrhus-cancer stroma is abundant and the alveoli are narrow, with the cancer-cells frequently small. Fatty degeneration of the cells often occurs, while the stroma remains subsequently to contract. Secondary metastatic growths occur



Cancer of the Rectum.

Specimen in the pathological museum of Northwestern University Medical School.

porary relief is obtained thereby, even the cachexia disappearing for a time. Digital examination is deceptive, because of the extreme softness of the tumor and the apparent fluctuation imparted; however, examination of a little aspirated fluid will remove all doubt, by disclosing the presence of cancer-cells and blood. As the deeper structures degenerate, they become cystic with a mucoid, glue-like, translucent, yellow substance, which distends the tissues; and the growth is called alveolar or colloid cancer. Generally speaking, it may be said that the softer the cancer mass, the more rapid its growth and the greater its malignancy. These encephaloid cancers are the

late, and there is hope to effect a cure providing that they are early and completely excised.

Melanotic Cancer

Melanotic cancer is rare within the rectum. Its histological relationship is not clear. It is classed as a carcinoma by certain pathologists, as a sarcoma by others. It is soft and medullated and has increased pigment. It is rapid in growth, very malignant, and often becomes generalized. Only

10 cases have been reported, and only 6 of these had complete histories. Of these, 5 were in men and 1 was in a woman. The ages of the subjects varied between 45 and 64 years. Microscopical examinations were made in 5 cases, and these were all classed as sarcoma. The symptomatology was the same as that of any rectal cancer, with the exception of one case, in which the stools were black, and in which the examining finger was blackened.

The Alcohol Problem as Seen in Ancient and Modern Times

By T. D. CROTHERS, M. D., Hartford, Connecticut

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EDITORIAL COMMENT.—This article is an excerpt from the advance proofsheets of a book soon to be published. Doctor Crothers very kindly permitted us to print the chapter, as here abstracted.

THERE is a historic side to the question of moderate drinking that strikingly confirms the biblical statement that there is nothing new under the sun. Recent researches in the tombs and sarcophagi of Egypt and the ruins of the buried cities of Babylon show that the temperance question and the use of wine and beer were topics of interest at least seven or eight thousand years ago. Radical laws were passed, regulating the drink-traffic and punishing violators by death. Excessive use of spirits was recognized in the early Egyptian dynasties as a species of madness with degrees of irresponsibility. In order to take advantage of another man for a base purpose, he was made drunk by beer or wine. These facts were well recognized. The same questions came up then as today: To what extent may one drink small quantities of beer or wine and preserve his vigor and health; also, does their moderate use daily lengthen life and give more efficiency to the labor and one's vigor?

Laws enacted in the time of Ptolemaeus I, somewhere about 8,000 years ago, indicate that wine was believed to have a special influence over the spirit-life—that through its influence the spirit could demonstrate itself, break away the bonds that held it and reign for a time in the flesh. The man

who drank heavily and was wild and delirious was in the power of a bad, destructive spirit, which sought to break down everything that was good; when he was low and beastly in his conduct, it was through some gross demon in possession; and so on through the various degrees of abnormal conduct, which indicated the good or the bad spirit that had gained possession of one.

It was distinctly stated that it was very dangerous and destructive to allow spirits to come into the life of the present, breaking down and changing the direction and force which it should take. Hence, the man who got drunk often and acted wildly and badly was given over to the possession of demons and his future was one of great doubt. His spirit would be crushed and he never could come back after death to occupy his body again, but, would be lost in the shadows of some dark, miserable world. Men who persisted in drinking to the point of intoxication either were made slaves or were executed—they had no part in rational life.

Effect of Alcohol in Small Quantities

In one papyrus it is asserted that wine taken daily in small quantities opens the door of the underworld and gives good and bad spirits an opportunity to break down the barriers that hold men free until they

are called to leave the body. The inn which men occupy until death shall call the tenant away is injured by wine in small quantities, and the enjoyment coming from its use is followed by sorrow, discontent, and unrest; and the moderate wine-drinker is never satisfied with this present condition, but, is always looking for some other, better condition, which wine seems to bring to him, only to plunge him back into the dark recesses of sorrow.

Wine Forbidden to Officers

On the Babylon cuneiform tablets are recorded laws forbidding the use of wine in any form to persons engaged in public business, and which asserted that no work done for the government by persons using wine could be perfect. All builders of palaces, officers of armies, and managers of public works were required to abstain, absolutely, from all use of wine.

In another age, the king, in a royal decree, attributes recent disasters to the use of wine by the leaders, and commands, under pain of death, that no spirits shall be taken by persons engaged in doing public work.

Various reasons were given why wine should not be used, the principle one seeming to have been that it made men dishonest and selfish and unfaithful to the interests of the monarch. In Egypt, the reasons were theological; in Babylon, they were commercial, economic, and had reference to the inefficiency and losses which followed its indulgence.

In celebrating the Feast of the Dead in Egypt, where each celebrant partook of wine into which the spirit of his ancestor had entered, the question would be how much he could drink, and what quantity was safe so that he could carry on the observances of the sacrament without confusion. Eventually, it was decided that the priests alone could drink the wine with safety and that the worshippers, looking on, must catch something of the spirit of their ancestors and friends who came back and entered into the fruits and drinks of the sacrament.

The same question has arisen in the churches of today, namely, whether wine is safe for sacramental purposes, and the facts gathered to prove its danger have assumed great proportions, and many of the churches already have substituted unfermented grape-juice for this purpose. Prob-

ably that is what was done in Egypt in that long-distant past.

What Scientific Tests Prove

Science has been testing this question of moderate drinking, and its conclusions are becoming more and more emphatic; and, curiously, some of the whimsical reasons given by the ancients have been found to have been shrewd approximations of actual facts as they are now just beginning to be recognized.

The theory so confidently asserted in many quarters, and believed to be beyond question, namely, that alcohol in small doses has a tonic action on the body, giving it additional strength and vigor, has no support in modern research; rather, on the contrary, its so-called good effects are found to be due to its narcotic, soporific properties. For example:

A man, temperate and well, is carefully measured from day to day, to determine the capacity of his senses of sight, hearing, taste, and touch; also his muscular power, fatigue-sense, rapidity of thought, memory, and capacity of endurance. The averages of many days' examinations constitute a basis of comparison; and then the man is given, say, a half-ounce of spirits, usually ethylic alcohol in water, for the reason that this is the purest and most uniform of all spirituous drinks. One hour later he is subjected to the tests, when it is found that all his functions are depressed and the senses are diminished in acuteness and capacity. And this can be expressed in figures. Thus, the eyesight and hearing are diminished in acuteness to the extent of so many inches or feet. The muscular output is lowered by so many pounds, and the fatigue-point is increased, showing diminished capacity for exertion and endurance. The brain has lost its quickness and moves more slowly, and this is measurable in seconds. The power of comparing one thing with another is diminished, and the percentage of mistakes in memory-tests has increased to nearly double. And so on with every function of the body. The heart's action has first been raised, but then has fallen as far below the normal as it had been forced above.

The conclusion is, that alcohol is not a tonic, does not impart new power and strength, is not a stimulant capable of rousing up latent energies and enabling one to

do greater work; but, rather, that its effects are the same in every instance and under all conditions, namely, depressing and sleep-producing.

Another fact not popularly recognized is, that the action of alcohol is cumulative; that is, the effects of continuous use cumulate and finally become manifested in some obscure injury of the mind or nervous system or by degeneration of the organs.

In Europe, gout, so-called rheumatism, heart disease, and kidney disease are the very common terminal lesions of moderate drinkers. In this country, we have apoplexy, cerebral hemorrhage, so-called strokes (paralysis of different parts of the body), pneumonia ending fatally through paralysis of nerves leading to the lungs, and the so-called galloping pulmonary tuberculosis with its sudden and rapidly fatal outcome.

Heart disease includes a great variety of affections that cause a sudden stopping of the heart, either with or without any exciting cause—in reality, a wearing out and stopping of the organ from age and debility.

Effects of Wine and Beer

Small doses of alcohol taken in the shape of wine or beer at the table have precisely the same effect as is produced by diluted grain-alcohols; these differing merely by the simultaneous presence of some extractive matters, ferments, toxins, and substances that derange digestion and favor the development of noxious germs. Furthermore, the liver is overworked in its enforced efforts to eliminate the products of foods that are not available for building up the body. The beer-drinker is literally blocking up the system with waste products, which interfere with normal supply and overtax the kidneys. As a result, Bright's disease and other disorders cause untimely death. One who drinks wine at meals is taking, beside the small amount of alcohol, acid and salts, and extractive matters that may be very dangerous and obstructive to the food supply of the body, deranging the protoplasm and the food-products and increasing the wastes, as well as diminishing the quality of the supply.

A very pronounced effect from the steady use of beer and wine or small quantities of spirits is, the derangement of the circulatory system. Alcohol diminishes the arterial tension. The blood is propelled

from the heart in greater velocity and the walls of the vessels are strained, so that they can not contract the vessels and force the current back with the same velocity; and after a time this failure produces paralysis, or inability to expand or contract according to the pressure, and this produces congestion. The effect of alcohol on the heart thus causes it to throw a greater volume of blood with greater rapidity for the first few moments after spirits are ingested, but, after that its power is diminished. The blood current is weaker; both the power of driving it out and the capacity of returning it to the heart are feeble. The flushed face of drinkers after a single glass of beer or spirits shows this mechanical obstruction. The beer- and wine-nose and face of persons who have indulged in these excitants a long time show the permanency of this obstruction. This surface appearance extends to the brain and other parts of the body and comes from the moderate use of spirits.

Wine and beer, when partaken in childhood, check cellular growth, destroy protoplasm, and change the entire physical nature of the child. Studies of heredity show this very markedly, particularly where spirits in any form had been used continuously.

The Endurance Impaired

There is another condition, of a more obscure nature, which scientific studies, both in the laboratory and in individual cases, have elucidated, namely, the incapacity and physical defects seen in moderate drinkers.

First, the power of endurance is greatly diminished. No person using spirits for any length of time, in small quantities or otherwise, can endure fatigue, mental strain, and muscular effort, as can those who do not drink. When put to the actual test, they break down and exhibit incapacity. Two men, one a total abstainer and the other a beer-drinker, both following the same occupation and both seemingly in excellent health, started on a bicycle-ride. The beer-drinker gave out at the end of 100 miles; the other continued to the end of the journey, some 400 miles, without any discomfort.

Moderate drinkers are unable to exercise muscular strength and to do mental work beyond a certain narrow limit without suffering. The capacity to add figures, to lift weights, to walk certain distances, to direct affairs requiring attention to detail, is uni-

versally markedly lowered in this class of persons. Studies of the mental capacity of moderate drinkers reveal the same early fatigue-point and the incapacity to hold the mind to a definite topic clearly. Faults of memory are apparent; failure of consecutive reasoning, absence of conservatism, credulity, skepticism, and a great variety of fine mental shadows and so-called weakness mark the mental decline of persons who drink steadily. Curiously enough, such persons are never conscious of this fact, and are inclined to minimize it by attributing it to a failure of others to judge them properly. Psychological examinations bring out these defects very markedly. Dickens' later stories show startling evidence of the rapid decline of his genius, both in plot and description.

The conclusion is, that alcohol is an anesthetic in its action on the delicate processes of the brain and organism, and a persistent derangement steadily carried on is

sure to leave permanent defects that may not be recognized until irreparable damage has been done. Probably the pronounced irritant action of alcohol on the cells and the circulation is in the nature of a shock, which, by constant repetition, destroys the uniformity and perfection of the activities of the body.

The well-known illustration of a steel bar that is struck lightly with a hammer continuously for a long period and then suddenly falls apart is applicable here. The concussion from each blow has finally destroyed the tenacity of the fibers and they break down—not from one blow, but from the constant succession of shocks, which has prevented readjustment and restoration following the blows.

In like manner, the continuous use of spirits lowers the repair processes and deranges the defensive forces of the body beyond the point of recovery, and thus invites disease, disintegration, and death.

The Progress of Psychiatry During the Last Twenty-five Years

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IT is hopeless to undertake anything but a personal sketch of the substantial progress made in the last quarter of a century in our knowledge of the insanities and in our care and provision for the insane themselves within our limit of two thousand words. Fortunately, we may begin with the classification of Kraplin, which appeared early in this period and still holds good. Thus, we find that in all languages the clinical nomenclature proposed by this great psychiatrist has been accepted and still remains in use. But, he taught little or no pathology, little etiology, and less therapeutics. We will confine ourselves to the more comprehensive groups and eliminate all exceptional and many interesting but numerically unimportant factors. We may select, for example, (1) paresis, (2) dementia præcox, (3) manic-depressive insanity, and (4) the senile insanities.

Advances in Our Knowledge of Paresis.

At the beginning of our period, there was a well-founded clinical opinion that

syphilis generally is present in paretics; however, it was presumed, and stoutly contended, that the disease did appear and might occur where no syphilitic infection had ever existed. There was, however, held to be a distinction between brain syphilis without paresis, and brain syphilis with paresis; and this opinion still confuses many.

Such a distinction, however, was swept away by the morphologic studies of Nissl and his school, and especially by the histologic demonstrations of Alzheimer. It is now possible to assert from the histologic morphology of a brain alone that the patient was or was not a paretic. This is the one victory of the pathologic morphologist in the field of psychiatric medicine. There is nothing anywhere to compare with it, except in the recognition of that alcohol-psychosis known as Korsakov's disease. In no other of our four major clinical groups, is the morphology diagnostically conclusive or even suggestive. In dementia præcox, in manic-depressive insanity, and even in

senile dementia, the morphologic evidence is *nil*, or, if it can be said to be recognizable, it is not conclusive.

Further, during the last quarter of a century, two marvelous advances in syphilology make the diagnosis of that disease in any form almost absolute and thus clear up entirely the etiology of any of its manifestations, paresis among them. The spirochetes are demonstrable in the tissues of the body, while during life the antibodies are recognized in the blood and are perfectly diagnostic of the presence of the infection (Wasserman reaction). It would hardly be worth while to discuss with any psychiatrist of today the question of the non-syphilitic origin of paresis or of the etiologic difference between various clinical forms of cerebral syphilis. The examination of the cerebrospinal fluid by the "goldsol" and the morphologic methods has further assisted in making possible the early and positive diagnosis of paresis.

Unfortunately, the solution of the etiologic problem of paresis has not been attended by any great strides in its treatment. It is still a fact that the modern antisyphilitic medication is but exceptionally effective in paresis. Nevertheless, the diagnostic possibilities of the Wassermann reaction and the effectiveness of early general and well-measured intravenous medication tend greatly to diminish the number of neglected and untreated patients from whom the bulk of the paretics are recruited. Intraspinal and intracranial medication in established paresis is still of questionable usefulness. The prevention and cure of paresis is a question of early diagnosis of syphilis and of effective treatment, i. e., free-dispensary work.

The Etiology and Treatment of Dementia Præcox

The work of a multitude of isolated students on the pathologic morphology of dementia præcox has, during the last ten years of our period, brought forth some scant positive results. These patients have a heavy brain and one in which the sulphur content is increased. There is also a hydrocephalic condition of moderate extent, which, as a rule, is greater on the left than on the right side. Morphology has nothing new to offer, and, although Southard and Nissl point out particular modifications in the cellular anatomy of the brains of some of these patients, there really is *no abnormal*

mal. morphology of the brain characteristic of dementia præcox.

The psychogonists early took advantage of the absence of brain changes, to defend their negativistic philosophy; however, Cazemali has shown that the blood pressure in dementia præcox is lower than normal, and Willi Schmidt and Schultz have demonstrated that the intramuscular injection of $\frac{1}{2}$ mil (Cc.) of adrenalin (P. D. & Co.'s) does not raise it, but, rather, ordinarily causes it to fall. (Adrenalin pressor paradox.) Installation of a few drops of adrenalin solution into the conjunctival sac causes the adjacent pupil of the dementia-præcox patient to dilate. (Pupillary paradox.) As a rule, the blood is highly concentrated and the leukocytes are diminished. (Polycythemia and leukopenia.) The number of these corpuscles fluctuates rapidly and betterment generally appears when the number of corpuscles approaches normal.

The intraspinal pressure (and, therefore, probably the intracranial pressure) in dementia-præcox patients is high (150 to 380 mm. of water), as has been demonstrated in the laboratory of the Psychopathic Hospital. The normal for healthy young men and women is 40 to 90 mm. of water. Even after the grand remissions which our treatment has generally brought about, the spinal pressure remains high.

Nearly all dementia-præcox patients when examined fluoroscopically after a barium meal, disclose a pronounced cecal stasis, extended from forty-eight hours to four or five weeks. The cecum is thick and its distal portion retort-shaped, terminating in the ring of Cannon. This ring is in a state of tonic spasm capable of sustaining in some instances a column of water 32 to 55 inches high before it gives way, and allows the water to pass into the transverse colon. The feces contain a toxic substance that may be removed by dialysing. This substance gives the Pauly reaction; it produces a hive-like erythema when scratched upon the skin; and it causes the virgin guinea-pig's uterus to contract. These points have all been repeatedly demonstrated in my laboratory. In the stool, there is a colon-bacillus that has the power of catabolizing histidin in 5-percent solutions at a temperature of 37 degrees C. The maximum product is obtained at the end of the fifth day.

It is uncertain whether there is any change in the calcium content of the blood

that might be related to the spasm of the sphincter of Cannon; however, in the meagre examinations that we have already made, the calcium content of the blood seemed to be higher than normal. In spasms of the pylorus, the conditions are different, for, there a calcium poverty of the blood and an increased calcium content of the brain obtains.

In my own laboratory, one patient has recovered, apparently, of a typical and severe case of dementia-præcox by a detoxicating process somewhat similar to that employed for morphine- and alcohol-habituates and known as the "Townes-Lambert" treatment. Four other patients have not responded favorably to this method. The idea is, to paralyze the circular muscles of the sphincter by means of large doses of belladonna and hyoscyamus and to clean out the gut freely by giving compound cathartic pills and pills of blue mass. The remedy is continued until the stools are highly tinged with bile; twenty-four to thirty-six hours.

Among 19 patients treated by the intravenous injection of large quantities (500 to 1500 mls., or Cc.) of physiologic salt solution, 2 have made a remarkable recovery, but, the remainder evinced little or no reaction. One of the recovered boys has been working in the same shop for seven months and appears to be fit and alert.

The performance of an appendicostomy and the daily irrigation, five hours after the last meal, of the cecum and colon with 6 to 10 quarts of very warm water—which also may contain glucose and yeast—has resulted in the apparently complete recovery of all except 2 of the 14 patients. The improvement shows itself almost at once; however, 2 of the patients failed to reveal

any physical or mental benefit for three or four months after the operation.

Manic-Depressive Insanity

There is no morphologic pathology of manic-depressive insanity. It is the most hopeful of all conditions for which patients are committed to our state institution. The treatment is more successful than rational. Elimination, baths, outdoor life, and relative isolation effect a large percentage of cures with little or no mental deterioration.

There has been little progress in the treatment of the insanity of the aged outside of better hygienic conditions and more vigorous and rational elimination. In these cases the diet is a matter of the utmost account and where distortions of viscera and displacements exist, a better alimentation and improved mental condition follow replacement, mechanical support, massage, baths and well-directed exercise and diet.

To summarize, we can say that whereas at the beginning of our period the physical basis of no mental disease had been demonstrated, the physical basis of every form of mental disease has now been proven beyond any possibility of doubt. While at the beginning of our period only occasionally did recovery follow after commitment and then for the most part in the manic-depressive group and in the aged demented, now a large number of paretics recover by vigorous anti-syphilitic treatment on early diagnosis and there is reason to believe that the condition of the dementia-præcox patient is not so devoid of succor as we have generally been taught to believe.

In a following paper we will discuss the progress of psychiatry from the standpoint of architecture and material equipment, from the standpoint of administration and from the standpoint of professional service.

An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichucalco, Mexico

[Continued from November issue, page 822]

Wayside Temptations

HUMAN nature in man, however curbed, cribbed, confined, is like the mental state of the fabled "sow that is washed": a pathetic yearning, a longing fondness to return to the abjured haunts spasmodically seizes one in some unguarded moment, if

but to peep back askance with one eye and then to plant the foot more firmly forward. This thing of mining out an impassable gulf between oneself and hope on earth may be somewhat serious, after the die is cast and the whirling flood is seething behind.

In the temporary absence of the family

physician, I was called to attend a wealthy planter's wife, who was down with a perilous fever. I found a queenly Andalusian woman of middle age, the mother of a daughter of some seventeen summers, the very counterpart of my lost Carrie, and whose father was of pure Castilian stock; but, a hurried survey disclosed the patient in a most pathetic state, in which I could not discover a single symptom warranting a favorable prognosis. The patient was unconscious, although there were evident no signs of immediate dissolution. I went to work with an indomitable will, as never before nor since have I felt more positively intense. The girl clung to the side of the cot where lay her fevered mother, convulsed with a suppressed emotion that neither heaving sigh nor moistening eye betrayed, yet not masked from the searching scrutiny of my practiced eye. I spoke to her: "Pobrecita! puedes ayudarme?"—poor little one! can you assist me?" And without a tremor in her low voice she assured me that she could and would unflinchingly, with her last drop of blood, do anything I asked if it would modify one pang of her mother's suffering.

Rapidly as thought I instructed the girl in the mysteries of enematas, sponging the body, massage, whatever of like measures I relucted to perform in her presence. Forthwith she bared up to the shoulders her rounded arms of classic mold, and tied a big kitchen-apron around her pearly neck—and I had before me a trained nurse that might have been the envy of ninety-nine of a hundred doctors. To put medicine into the patient's mouth, it was necessary to raise her head. The girl flung her arm under the neck and raised her mother with agile dexterity and then lowered her again with a delicate care I have never seen surpassed.

Thus we worked on through the long and anxious hours of the night filled with uncertainties, the wornout husband and servant girls the while sleeping in chairs. I managed the hypodermic medication, and she the clysters, as necessity demanded. When waiting between treatments, she held her hands tightly clasped against her bosom, her glorious dreamy eyes of sorrow riveted on the marble-like features of her mother, perhaps watching with greater solicitude for some cheering change than was I, scanning that same pallid face.

The suspense was too terrible for words

to portray. The woman's temperature held tenaciously at 41.3° C., hour after hour—after ten 15-minute, four 30-minute, and two one-hour doses of aconitine. In desperation, I then returned to 15-minute dosage, three times, repeated; and then, at last, a slight moisture, like a timid dew, began to glitter on the woman's parching forehead, and, in one more hour she was in a perspiration like that of a Turkish bath, and the temperature down to 38.2 degrees. And then—"Oh, doctor! God will bless you eternally!" burst from the pallid lips of the watching girl—the first words uttered by either of us during three long, trying hours.

By midnight of the second day the patient was conscious and feeling refreshed; still, I was so urgently importuned that I remained four days longer, when she was able to sit up in a rocking chair.

That time I was forty years younger than I am tonight, with no tint of the frost of forty-five winters in my black hair and beard—in fact, looking some ten years younger than I actually was. I probably was professionally attractive, as the only inordinate pride I have is, that I am a clinical artist, and the only ambition I know is, to be able to cope successfully where all my classical education admonishes me that there is no hope for my patient. And thus, it may be, I towered in the eyes of the fair young Mexican senorita when she saw her adored mother, seated in the rocking-chair, able to walk to the table alone and sit with me through the farewell dinner. Mayhap I left behind me in that home circle a rare feeling of gratitude. Disraeli—Earl Beaconsfield—when at the zenith of his career was asked why he married as he had married, and his answer was: "For a reason to which you are a stranger, sir—gratitude."

Gratitude

There is genuine gratitude for professional service, sometimes, where the compensation has been most liberal as well as where there was no remuneration. I have met such heartfelt gratitude very often, many more times, indeed, than people are wont to believe that it exists. And, really, the most pleasing compensation I ever have, whether in cold cash or otherwise, is, to witness a "family jubilee," such as earlier in this narrative I told of—about the patient sitting up in bed sucking an orange in the early morning, when he had

seemed hopeless the day before, or such cheering relief as that or the incident just portrayed.

The Happy Days at the Plantation

Two months later, the family-carriage of the planter drew up in front of my hamlet office, bringing me a request that I go along to the plantation. No explanation accompanied this invitation. The father, the mother, and the daughter met me on the veranda, all in blooming health, apparently. Naturally I supposed I was called to attend some sick servant. We proceeded to the parlor, and entered into a general conversation, when, after a respectable time, I ventured to ask about the patient. The answer came from the laughing girl: "O, doctor, we three are the only patients you are to find; everybody in the place is in blooming health." Then the good people explained that the hamlet was such a dull place Sundays that the old gentleman expressed the thought that they owed me sufficient gratitude to decoy me out to a little country-house picnic.

I passed a charming day, while the fair young beauty was more enchanting than can be told, enough to have shaken the faith and vows of an Anchorite. She played the piano exquisitely and sang rather sweetly, in the thrilling cadence of the voice of the far South. The mother went away to the kitchen to look after the preparation of an extra dinner, and the father was called out, for some purpose, by the manager, so that the fair girl was left alone with me in the big parlor. She had been to Paris and New York and spoke both English and French quite well. And she conversed interestingly of Paris, of the little shops and the big stores, and the many things that I had quite forgotten. She wished to talk of New York, but, as I had not seen that city since before I went to Paris, it was all Choctaw to me. So, we finally drifted into literature. She was pretty deep in some of the popular French

literature, even some that I had never read—and I had devoured much of it in Paris, on the new plantation I have mentioned, and during the Civil War. The young woman had stacks of these books in the house. By all odds, she was the brightest, most practical young woman I had ever met in Mexico, although living so far away from the more elegant centers. But finally the dinner-bell brought the enchanting reverie to an end.

The repast finished, saddled horses stood ready, and away we galloped over the big plantation, which was largely devoted to grazing; but, one section of it, where big black bulls, wild as deer, were being bred for the bullfights, we did not enter. By easy stages, we ascended to the summit of a rugged mountain, that fell away, terrace-like, toward the Pacific, whose blue crystal glittered beneath the clear tropical sunshine, and whence there blew refreshing zephyrs. Resting a spell, I looked long and intently over that vast waste of water—no more desolate and lonely than my own stranded life—silently musing on the nameless mysteries slumbering beneath that sweeping surge, till unconsciously I murmured, "Till the dirges of his hope that melancholy burden bore of Never,—nevermore."

"And why that mournful pathos, doctor? The raven of the ark is not now brooding with flapless wing over that azure wilderness." Thus a soft, sweet voice near my elbow broke upon my ear, and aroused me to living realities; it made me shudder, even as I shuddered when I beheld the ruins of my paternal homestead in the chilly gray twilight of my homecoming on that fateful morn of long ago. No more was said. As the day drew to a close, we headed our mounts homeward, and after a repast the carriage took me back to my lonely office, if not a wiser certainly not a sadder man.

[To be continued.]



What Others are Doing

A HAPPY HYPNOTIC COMBINATION: APOMORPHINE WITH HYOSCINE

In *The New York Medical Journal* for December 1 last, Dr. C. J. Douglas calls attention to the fact that apomorphine, administered hypodermically in small doses, shuts off the stream of consciousness with valve-like precision. For many years he has relied upon this remedy as his most valuable hypnotic, the only disadvantage being that the action, while prompt, is but transient.

On the other hand, hyosine, which now is generally recognized as a hypnotic of remarkable merit, does not establish its soporific effect until one or more hours after administration. The distressing feature of this peculiarity is, that at first patients are liable to be excited, instead of calmed, by hyosine, their great restlessness requiring constant attention so as to keep them in the recumbent position.

However, the transient character of the hypnotic action of apomorphine and the early exciting action of hyosine are both eliminated by a suitable combination of the two; patients succumbing to sleep soon after the administration of the injection, and this sleep being prolonged until the lasting action of the hyosine has been exhausted.

For the hyosine, Doctor Douglas declares that the average dose may best be fixed as 1-150 of a grain, while under no circumstance should 1-100 gram be exceeded. Concerning the dose of apomorphine, he gives it as his belief that 1-30 of a grain, as originally recommended by him, is unduly large and that a smaller dose as a rule is preferable—this being from 1-50 to 1-40 of a grain.

Here, then, we have an emergency hypnotic, combining two remedies that are entirely unlike, each attacking the problem from a different angle, each supplying the other's deficiencies, and each correcting the other's faults. When quick action is desired, in conjunction with entire safety,

and yet a reasonable probability of a good night's sleep, this has been found a most dependable remedy. In the treatment of the excited stage of alcoholism and other mental ailments, it is especially valuable. It promptly overcomes the insomnia of these patients, regardless of their wishes in the matter. To be able thus safely to enforce sleep, even when the patient's unbalanced mind makes him earnestly desire to keep awake, is quite worth while and is an accomplishment that gives satisfaction to every one concerned.

CONSTIPATION IN INFANTS AND YOUNG CHILDREN

In discussing the subject named in the caption, in the *International Clinics* (1917, vol. 3), C. G. Grulee summarizes his views as follows: "I should like to urge that catharsis be abandoned as a routine treatment; to ask that the simple rules of diet be insisted upon; and that, when these are not sufficiently effective, such mechanical factors as glycerin suppositories and liquid paraffin be resorted to, and that only in extreme cases of acute constipation a cathartic be used."

PAPAVERINE IN URETERAL CALCULUS

In *CLINICAL MEDICINE* for September, 1916, there was presented a review of some work done by Doctor Macht and his associates with papaverine. On the strength of the observation that papaverine lowers the tonus of all organs composed of smooth muscle, Doctor Macht, together with Doctor Geraghty, conceived the idea to introduce a solution of papaverine through the catheter directly into the ureter of a patient who was suffering from ureteral calculus. The results of this clinical test have been reported in *The Johns Hopkins Hospital Bulletin* for April, 1916, page 119.

In this experiment, 5 cubic centimeters of a 2-percent solution of papaverine hy-

drochloride was introduced into the ureter just below the stone. On the same afternoon, slight colicky pains appeared, during which the stone descended a considerable distance. After a second injection of the papaverine, the calculus was passed spontaneously.

Undertaking thereafter a number of experiments on the isolated guinea-pig ureter Macht found that the ring of pig's ureter when suspended in oxygenated Locke solution, contracted rhythmically not unlike a frog's heart, under the circumstances, but, that relaxation and a discontinuance of the contraction occurred after papaverine solution had been added. It was ascertained that papaverine exerts a local as well as a general analgesic effect.

This experience found confirmation in several observations reported by H. W. E. Walther in *The Urologic and Cutaneous Review* for September, 1916. This writer relates the cases of three patients suffering from ureteral calculus, in all of whom the injection of papaverine into the ureter, just below the stone, was followed by the discharge of all calculi present, and that the expulsion was virtually painless in every instance. Doctor Walther employed the sulphate of papaverine, because of its greater solubility.

RELATIVE MYDRIATIC VALUE OF ATROPINE AND HYOSCINE

Experiments conducted by G. Joachimuglu on the relative mydriatic powers of atropine and hyoscine have demonstrated (*Berlin. Klin. Woch.*), with regard to cats, that the latter alkaloid is ten times more active than the former; a fact that may be expected to prove of value in practice.

CALCIUM SULPHIDE IN SMALLPOX

An interesting account of the efficient antiseptic action of calcium sulphide in smallpox is reported by Dr. F. S. Diller, of Rantoul, Illinois, to *The Therapeutic Digest*. This account bears upon four cases of smallpox, in each of which the patient received 1 grain of calcium sulphide every four hours during the more severe stages of the disease.

The most severe case (No. 4) was that of J. S., aged 53 years. Septicemia became

quite pronounced during the pustular stage and the patient was more or less flighty and restless, owing, no doubt, to the high fever. He received 30 minims of normal tincture of echinacea every two hours, also 1 grain of calcium sulphide every four hours. Marked improvement was manifest in twenty-four hours. The nervous symptoms lessened and the temperature gradually came down.

Since in the other patients no evidences of any undue absorption of toxins or of unusual septic infection developed, treatment was limited to the calcium sulphide. All made an uneventful recovery.

AN ANALYSIS OF 125 CASES OF GOITER

Leigh F. Watson, the author of an article on this subject published in *The New York Medical Journal* for September 22 (p. 549), reviews the records of 125 goiter-patients, with reference to the cause, patient's age at the time of attack, and the effect of previous operations in certain of the cases. He illustrates, by means of tables, the degree of enlargement and gives the results following quinine and urea injections.

In 43 percent of the subjects, no exciting cause could be ascertained; in the remaining 57 percent, the attack could be ascribed to a definite exciting cause. Of the 125 cases, 15 percent were caused by worry; parturition was responsible for 11 percent; in 9 percent, the condition was due to puberty. There was a family-history of goiter in 20 percent and of nervousness in 11 percent, while 19 percent had had tonsillitis. Of the exophthalmic patients, 5 percent first noticed the goiter eight years before the examination, at the average age of 34 years, and the symptoms developed at the age of 40. A history of an acute onset was given by 50 percent, two years before coming under observation at the average age of 29 years. Of the nonexophthalmic patients observed more marked symptoms of intoxication made their appearance in 60 percent as the goiter became more chronic.

Before coming under treatment, 5 exophthalmic patients had had ligation of the superior thyroid arteries, followed by temporary relief; 4 had had partial thyroidectomies, without permanent benefit; 3

had had pelvic operations, without a lessening of the hyperthyroidism; the condition of 1 was aggravated by a panhysterectomy; 1 had had a tonsillectomy six months before, without influence upon the severity of the exophthalmic symptoms. Enlargement of the gland ordinarily begins in the right lobe, sometimes in the isthmus, and least frequently in the left lobe. In 95 percent of the exophthalmic patients of this group, both lobes and the isthmus were involved before the goiter became exophthalmic. A majority of the patients noticed increasing symptoms of intoxication as the goiter became more chronic, with gradual involvement of both lobes and the isthmus. Of the mildly toxic patients, 18 percent became exophthalmic after an average period of five years.

This study indicates that both nontoxic and toxic goiter occurs later in life in nongoitrous localities than in sections where the disease is more prevalent.

The following tables show the results after quinine and urea injections:

| | Relieved—Average | |
|------------------------------|------------------|--|
| Exophthalmic goiter | 85 4 mos. | |
| Nonexophthalmic goiter | 84 2 mos. | |
| | Cured—Average | |
| Exophthalmic goiter | 80 5 mos. | |
| Nonexophthalmic goiter | 75 4 mos. | |

| Improved | Not Improved |
|----------|--------------|
| 15 | 0 |
| 10 | 6 |

| Improved | Not Improved |
|----------|--------------|
| 15 | 5 |
| 12 | 13 |

Two patients suffering from severe toxic goiter, with exophthalmos of several years' duration, received only slight benefit; later, a lobectomy was done, without affording additional relief. Four exophthalmic patients were pregnant between two and four months; relief from hyperthyroidism followed the injection, and they went to term without there being a recurrence and had normal deliveries.

The number of patients cured is highest in the group of those who came for treatment early in the disease; the benefit received by those who came later was in proportion to the degree of damage done to the circulatory and nervous systems. A goiter that once has disappeared has never recurred. A majority of the patients in this group have been under observation for from two to four years.

The quinine and urea injection has limitations the same as any other treatment for goiter and can be employed only in selected cases. The treatment of the exophthalmic type in young adults is very difficult and should be attempted only under

the most favorable circumstances. If the best results are to be secured hyperthyroidal patients must have at least a year of mental and physical rest after treatment.

VISCERAL CRISIS OF THE ANGIO-NEUROTIC EDEMA

In *The Journal of the Tennessee State Medical Association*, there appears a highly instructive discussion of a case of visceral crisis, due to angioneurotic edema, that merits attention. A young unmarried woman, twenty-one years of age, consulted Dr. J. L. McGehee about a pain in the left iliac region, remittent in character, the exacerbations occurring at irregular intervals throughout the day, but, always much more severe at night, and at about the same hour every night. The attacks of pain were always accompanied by nausea and severe headache, the duration of which was from a few minutes to an hour. The radiation of the pain was, at

times directed upward over the crest of the ilium and at other times down toward the bladder. These attacks of pain, she explained, would vary greatly in severity, from the slightest discomfort to the most excruciating type, and simulated the passage of a renal calculus. The bowels had been constipated since the onset of the illness, two weeks before. Purgatives afforded no relief. The taking of food, solid or liquid, into the stomach precipitated an attack. Liquids were better swallowed than solids. Her temperature was 99° F., and the pulse was 88. The catheterized urine contained an occasional red blood-cell, but, gave no leukocytic response.

This symptom-complex being, as the author expresses it, bizarre and impossible to correlate, cystoscopic examination was undertaken; but, with negative results. A vaginal examination, at which the hymen was ruptured, likewise failed to disclose anything abnormal; but, afterward, the skin of the lower abdomen that had been subjected to pressure and irritation during

the bimanual examination displayed the characteristic wheals of a urticarial rash.

Here there was a cue, and the probability of a visceral crisis of the erythema-group of skin diseases became manifest. Acting upon this theory, the patient was placed upon hyoscyamine, 1-100 grain, and monobromated camphor, 2 grains; and this relieved the condition in eight or ten hours, the action of the remedies being exerted in part in a purgative effect. A recurrence of the attack, five or six days later, was relieved within an hour by one dose of the same remedies, and at the end of two weeks there had been no further return.

This case is of interest, for the reason that similar crises have caused patients to be subjected to laparotomy, on the suspicion of their having appendicitis or intussusception or obstruction of the bowel. It should be kept in mind that, as Osler says, one of the most constant features of this whole group of diseases (namely, of visceral crisis of the erythema-group of skin diseases) is, the recurring attacks of colic, sometimes with vomiting, sometimes with diarrhea, and occasionally with the passage of blood.

INTRAHEPATIC INJECTIONS OF EMETINE IN LIVER ABSCESS

In *The Calcutta Medical Journal* for January last (Cf. *Ther. Gaz.* July, 1917), Ghosh strongly maintains that all amebic abscesses of whatever size must be evacuated. Similarly, Rogers has pronounced this procedure advisable prior to making hypodermic injections of emetine, in which he is supported by other writers, who assert that liver abscesses do not yield to emetine treatment unless they first are drained out. This being so, Ghosh very logically suggests that, if the aspirator has to be used, it would be best to throw into the cavity a quantity of dissolved emetine and thus bring it into more or less direct contact with the amebas, without entailing additional risk or annoyance to the patient, but, rather, presenting the possibility of a more rapid recovery.

In employing emetine in this manner, it is possible to utilize a stronger solution than for hypodermic injections; no toxic symptoms having to be feared, even from doses as large as 1 1-2 grains or even more. The absence of danger from large doses, used

in this manner, is proven by the clinical experience of Ghosh, who, basing thereon, declares that the results achieved justify the adoption of this plan of treatment in all cases of amebic abscesses of the liver.

THE HYPODERMIC USE OF LOBELIA

In a brief but meaty article communicated to *The Eclectic Medical Journal* (Oct.), Dr. Cloyce Wilson calls attention to the fact that the physiologic action of lobelia preparations, hypodermically administered, differs somewhat from the action when given by mouth. A study of bedside conditions showed these effects to result: The patient feels a tingling over his body, accompanied by slight giddiness. The pulse is, at first, increased, and later becomes slower and of a fuller volume. There is more or less pallor. The skin is moist and profuse sweating may occur; nausea occasionally, but, not always. Vomiting seems to occur in those patients who have recently taken food, or who may have a more or less marked gastric lesion. After the nausea or also in case it is absent, the patient becomes relaxed and experiences a sense of well-being; if pain be not too severe, he will fall asleep.

Doctor Wilson has employed lobelia, hypodermically, in case of hysteria, hysteropilepsy, neurasthenia, convulsions of childhood, diphtheria, and asthma, in most of which there followed decided improvement and even recovery. In one case of cardiac asthma, however, there was little improvement, if any.

The author draws the following conclusions: (1) Lobelia, hypodermically, is a pain-relieving agent second only to morphine and in some cases better; (2) it is a stimulant of the heart and nerve-centers; it strengthens the systole and lengthens the diastole; (3) Lobelia, hypodermically, is a systemic antiseptic and antitoxic; (5) the secondary effects of lobelia, hypodermically, are relaxant and narcotic.

In the discussion of this paper, it was brought out that lobelia has been employed, with excellent results, in puerperal eclampsia, also in trifacial neuralgia. Attention also was called, very properly, to the necessity of attending to all indications presented in a given case; that, for instance, in asthma it was essential to establish good elimination, and that, in fact, neither lobelia

nor any other drug can be used as the be-all and end-all of treatment, but, only for its own special indications, while the entire symptom-complex present must be given complete attention if the patient is to be relieved of his ill health.

ABORTIVE TREATMENT OF ACUTE GONORRHEA

Surely, few diseases are of greater personal, familial, and socioeconomic importance than is gonorrhea, with its harmful effects upon the patient himself and on his or her marital partner, besides, especially, its pernicious destructive influence upon the eyes of their newborn offspring. When, therefore, a method of aborting the acute disease and of terminating it in the course of less than one week is offered in good faith by a physician who enjoys the confidence of his colleagues, it should be investigated with great care and faithfully tested.

Thus, in *The Urologic and Cutaneous Review* for July last, Dr. Saul Steiner, of New York, expresses his conviction that under certain favorable conditions the abortive treatment of specific urethritis is possible. Of course, one will have the best chances for success, when the patient presents himself during the first twelve or twenty-four hours of the attack, or, within three and five days after his exposure, and at a time when the gonococci still are located superficially, have not as yet passed beyond the fossa navicularis and have not penetrated deeply between the epithelial cells.

It is a condition for success that the mucous membrane should not yet be markedly inflamed, the urethral discharge should be mucoid or watery, the patient should feel only a tickling or itching sensation at the meatus, and in the secretion extracellular gonococci should be present—their being found in an intercellular position materially lessening the chances for success.

For cases in which all these conditions obtain, the author employs the treatment below, as described by himself:

"I first explain my treatment to the patient, in order to have his consent, which is necessary. I make sure that I can have the patient at my office three times a day for two successive days. When all these

conditions are satisfactory, I proceed to the treatment.

"First the patient empties his bladder; the lips of the meatus are separated and washed with a solution of bichloride. From a percolator containing 1000 mls of a solution of permanganate 1:3000, a stream is directed at the meatus, the lips of which are separated. This completes the cleansing of the meatus of any discharge or secretion containing gonococci. I prefer the percolator to the Janet syringe, because with it I can better regulate the pressure of the fluid and can get an even flow of 100 mls of fluid into the urethra.

Next, the anterior urethra is irrigated, gradually going deeper, up to the cutoff muscle, leaving space between the rubber nozzle and the meatus for a return flow, for this irrigation, 500 mls of the solution is used. The other 500 mls is injected into the bladder, when I can make the patient pass the urine without discomfort. The reason for going deeper than the anterior urethra, although the posterior urethra is not affected is, to prevent posterior urethritis, in case of failure, by making this part of the canal an unfavorable soil for the reproduction and multiplication of the gonococci. If the patient is nervous or too sensitive, the attempt at going into the deep urethra is abandoned and the whole 1000 mls is used for the anterior urethra only.

Immediately thereafter, an anterior injection is made with 5 mls of a 10-percent argyrol solution, using an air-bulb graduated syringe, and instructing the patient to hold it in for ten or fifteen minutes, when he lets it ooze out without forcing it.

Then, a wick of cotton $\frac{3}{4}$ of an inch long is soaked in the argyrol solution and inserted into the meatus, the glans is wrapped up in cotton and tied loosely with a bandage; a suspensory-bandage with a flap that holds the penis horizontally is applied, and, finally, the patient is instructed to get up from the table without straining his muscle. In this way it is sure that at least 1 or 2 mls of the fluid remains in the urethra. The patient must not pass the urine for six hours, after which he comes for the second treatment. If the patient receives his first treatment at night, he should avoid urinating all through the night.

"The second and fourth treatments are the same; the fourth being made twelve hours after the second. The third treat-

ment, six hours after the second, consists of an irrigation with permanganate only.

"After this, the patient is regularly irrigated with permanganate solution twice a day, without using the argyrol. If after three days the gonococci still persist and the discharge increases, the abortive treatment is abandoned and the patient is put under the routine treatment for acute anterior gonorrhea. With this method, I have been fortunate enough to abort the disease inside of four to six days."

Doctor Steiner calls attention to the deplorable ignorance prevailing, especially among young men, concerning the seriousness of possible dangers from neisserian urethritis, and suggests that they should be informed of the importance of reporting for treatment at the very earliest. Patients who present themselves at the time when abortive treatment no longer offers hope for success should be told that they might have been relieved much more rapidly if they had come sooner.

While admitting that Doctor Steiner's treatment is excellent, we have an abiding faith in the superior bactericidal power of Dakin's antiseptics, particularly Chlorazene and Dichloramine-T. The former, in 0.5-percent watery solution, makes an ideal irrigating fluid, while the latter is eminently suitable as a followup application; since, being oleaginous, it is soothing to the mucous membrane.

Furthermore, we miss any suggestion for systemic treatment, which, however, we consider of greatest importance. Saturation with calcium sulphide will go far toward making the blood and lymph of the subject so unacceptable to the invading cocci that they will soon be eliminated. Flushing the urinary passages, maintaining free elimination, and advising general dietetic precautions will aid in hastening the recovery.

FOOD INSPECTION IN CINCINNATI

For those interested in public health matters, the article in *The International Clinics* (1917, vol. 3) by Landis has an important place. He gives in some detail the trials and tribulations of the health officer in his effort to bring about the proper protection of perishable foods. He points out that the greatest obstacle to progress in this, as in other public health measures,

is, the political system prevalent in most of our large cities. As to the business man, Landis is convinced that he has undergone a radical change and is now desirous to conform to the health regulations.

The results obtained in Cincinnati have been highly satisfactory. Comparatively little time is now required in the police courts, where formerly it was an everyday affair.

IMPORTANCE OF POSTURE IN LABOR

In a discussion at the West End Medical Society of Louisville, Kentucky, Dr. J. E. Helms (*Ther. Gas.*, July, 1917, p. 467), cites an instance of common sense applied in the practice of obstetrics that is so instructive that we reproduce in full:

"As to common sense in obstetrics, I should like to cite an example occurring several years ago: Doctor Barbour, who was then professor of obstetrics in one of the medical schools of this city, sent two students to attend a multiparous woman in labor. They failed to accomplish delivery and sent for Doctor Barbour. After examining the woman, he concluded that delivery was impossible and asked me to see the patient and bring my craniotomy instruments. It was a face-presentation. The patient was a large plethoric German woman with a pendulous abdomen and roomy pelvis; but, the child was impacted and it was impossible to introduce the hand in order to turn it.

"The instruments were ready, the woman was anesthetized, and Doctor Barbour was about to begin craniotomy; but, before doing so, I suggested that the woman be elevated so that just her shoulders would rest on the bed, to see if there was not enough 'slack' in the abdomen for the child to recede. At first he was averse to doing this, saying, he had never heard of such a procedure, but, finally agreed to give the method a trial. The woman's nether extremities were drawn over the footboard of the bed, and we then had no difficulty in reducing the impaction, applying the forceps, and completing the delivery. The child thereupon was born alive and is living today.

"This case is cited merely to illustrate what may sometimes be done by the exer-

cise of judgment and common sense. To have treated that case according to our book-knowledge, or what the books teach us, would have meant sacrificing the life of the child and perhaps also that of the mother."

PITUITARY EXTRACT FOR INDUCING AND SHORTENING LABOR

In an article on the subject mentioned in this title (*Med Rec.*, Aug. 11, 1917), Drs. Arthur Stein and Henry Dover recommend the employment of small doses of pituitary extract frequently repeated for the purpose of strengthening uterine contractions; saying that, with the observation of certain precautions, it also is serviceable for inducing labor at term. The authors summarize their interesting discussion as follows:

1. The best mode of administering pituitary extract is by the intramuscular injection of an average dose of 2 or 4 minims.

2. The solution, in small doses, should be employed in labor at term, exclusively; never for inducing abortion or premature labor, where it fails completely.

3. The preparation is indicated after the onset of labor, for strengthening the uterine contractions; also, in combination with castor-oil, for inducing labor at full term.

4. Pituitary extract constitutes an efficient aid to the bougie when employed for this purpose.

5. The judicious use of these small, entirely harmless doses of pituitary solution serves to reduce the need for employing the forceps, thus causing otherwise instrumental deliveries to terminate like normal progressive labors.

THE FORCEPS OR PITUITARY EXTRACT?

Dr. W. A. Gartner declared, before the Kansas Medical Society (*Jour. Kans. Med. Soc.*, July, 1917), that he considers the use of the forceps in uterine inertia to be far better than the use of pituitary solution. First, because one is sure to make delivery with forceps; pituitrin may fail. Second, with the forceps one does not bring the head across the perineal floor as fast as pituitrin will if uterine contractions are

greatly stimulated by it. Third, one will not necessarily get an hourglass contraction and retained placenta with forceps; but, one is very apt to have both with pituitary substance.

However, Doctor Gartner still carries ampules of the pituitary solution in his obstetric bag. But, if he uses it, it is after delivering the placenta, and with the intention of checking hemorrhage by increasing uterine contractions, as he used to employ ergot.

Opinions differ. Properly used, pituitary solution has been found superior to forceps, by many obstetricians, for the purpose of terminating labor rapidly, when indications for this were present. Both measures need to be used with a large dose of brains and with fine discrimination. Both are reasonably safe—in experienced and expert hands.

VAGINAL IRRIGATION WITH LACTIC ACID DURING PREGNANCY

Some three or four years ago, Doctor Schweitzer recommended the systematic irrigation of the vagina with diluted lactic acid in the case of women troubled with pathologic secretion. H. Thaler and H. Zuckermann. (*Monatssch. f. Geburtsch.*), after following this advice in 153 cases, are greatly pleased with the results observed. In a large proportion the pathologic secretion becomes normal, while the morbidity of those thus treated is materially diminished. The lactic acid is employed in a 5-percent solution.

ERGOT IN ASSOCIATION WITH PITUITARY EXTRACT

As the physiologic action of the posterior pituitary lobe is better understood, its position in the armamentarium of the obstetrician is becoming more definitely established, and among other points worth while knowing is the fact that the doses at first suggested were larger than necessary, one-half or even one-third mil (Cc.) of the standard solution being quite effective, while at the same time less likely to work harm. It goes without saying that pituitary extract (posterior lobe) need not be given as long as labor progresses favorably, and that, indeed, it has no place in normal labor. However, when uterine inertia

supervenes, while cervical dilatation is almost or quite complete and there is no obstruction to the descent of the head, then pituitary preparations are indicated.

A valuable point that has been made repeatedly, for instance, by Dr. G. A. Hartsell in *The Charlotte Medical Journal* last July, is, that ergot acts as a corrective of the tumultuous uterine pains sometimes following upon pituitary administration, and that it should be given for the purpose of steadying the excessive contractions, as also to prevent postpartum hemorrhage.

MUSTARD-OIL INHALATION FOR TOOTHACHE

A recent writer in the *Muenchener Medizinische Wochenschrift* makes known what he pronounces a prompt cure for toothache, this consisting simply in shutting the eyes tight and then sniffing good and well upon a small vial containing volatile oil of mustard. The relief is asserted to be almost instantaneous, after the certainly very unpleasant byeffects have passed away. Also, the excruciating pain caused by inflammation of the middle ear is stopped by a single such inhalation. Of course, the relief is merely temporary, helpful though, until proper curative measures can be carried out.

Without wishing to cast doubt upon this report, the Abstractor is reminded of a little anecdote told by his father half a century ago, as a takeoff on Homeopathy. A wealthy Englishman visiting in Paris called upon a fashionable Homoeopathist to get cured of an obstinate facial neuralgia. The great doctor held a little vial under his nose, bade him to smell upon it, then pompously announced: "You are cured!" Asked for his fee, the doctor said, "Ten louisdore." Thereupon the unconvinced Britisher pushed his purse under the doctor's nose and said: "Smell! You are paid."

ON THE TRANSPLANTABILITY OF HETEROGENOUS AND HEMO- GENOUS TISSUES

In an article published last year (*Beitr. z. Klin. Chir.*, p. 233), G. Schoene discusses his further observations on his experimentation (conducted for some time) on the transplantability of normal tissues from one individual to another, and in this

connection he claims credit for having definitely established the fact—through his thorough theoretical and experimental studies—that such transplantations succeed only between blood-related animals, that is, of the same species, which means, also, from man to man.

Schoene's latest, more specifically confined experiments in this direction have developed some extremely interesting, positively established facts, which cannot but prove of practical value in this field; these, briefly, being enumerated by him as follows: The transplantation of tissues succeeds, and ensures its permanent survival, from mother to offspring, and sometimes reversely, from offspring to mother; they can be successfully transplanted from the father to his offspring, but not *vice versa*; success is attained oftenest and most easily between the offspring of the same parents.

This line of research, Doctor Schoene concludes, is only in its inception, and, so, the laws involved can not as yet be clearly surveyed; nevertheless, one practical suggestion already can be ventured: before a surgeon endeavors to transplant any organ, such as portions of thyroid gland, he first should make several trials with patches of skin, in order thus to discover the individual best suited as donor.

CALCARIOUS ABARTHROTIC GOUT IN A CHILD

At a meeting of the Society of Physicians of Vienna, Doctor Schramek exhibited a 9-year-old girl who for three years had been afflicted with hard, painless tumors (some cherry-sized) on the hands and elbows. (*Wien. Med. Woch.*, 1916.) These tumors exhibit a yellowish-red coloration, and some of them break and discharge a yellowish-gray mass consisting principally of carbonate and phosphate of calcium. The Roentgen-pictures proved the bones to be unaffected, while histologic examinations showed that these concretions are deposited in the connective tissue; but, any pathologic alterations in the latter were not apparent.

It is plain that the child is suffering from calcareous abarthrotic gout, a disease of which but few cases are on record. While other observers have mentioned the presence of phosphaturia, this does not exist in the present instance.

Miscellaneous Articles

Studies on Food Economics

IX. —Vegetarianism.

IN the forepart of this work we said: "In the order of creation, the vegetable kingdom preceded the animal, and, the dividing line between vegetable and animal life is as follows: Vegetables are capable of obtaining all they require for their existence solely from the mineral world; whereas animal life is entirely dependent on organic life, not only for existence, but for all life-processes; *omne vivum ex vivo*."

Doubtless, at first, animal-life depended solely on vegetable nutrition; likewise man, at first, was a vegetarian. Even to this day, the vast majority of mankind are more vegetable- than flesh-eaters.

As it looks today, the production of flesh for food is not keeping pace with the increase of population all over the world. We believe that flesh-eating is a departure from primitive innocence and is merely a transitory barbarism, to be ultimately superseded by a return to vegetable feeding, when once the preparation of food by cooking is better understood.

Another fact we note with regard to vegetable feeding is this: The majority of our medicinal remedies are derived from the vegetable kingdom. We will mention but a few, and those in everyday use as foods. Does one desire more red blood, which owes its red color to iron? In spinach, he will find an ample supply. Should there be an insufficiency of calcium in his makeup, he can resort to asparagus for an additional amount. Does he require a laxative, he need not resort to the mineral laxatives, for, in the bean, there is an abundance, while in Brussels sprouts he will find an ample supply of magnesium. Further, in the delicious pineapple, we find combined that most valuable remedy, iodine. Has anyone a tendency to dropsy, he will find an onion diet a great remedy. Or, is one afflicted with biliary calculi and colic, then

let such a one use freely black radish and carrots.

Is there a tendency to insomnia, or sleeplessness? The succulent lettuce will be found a somnifacient hypnotic of no mean power.

In this connection, we feel impelled to call attention to the many highly intellectual and noted persons that have become vegetarians. Perhaps the most famous vegetarian in the world today is George Bernard Shaw. Mr. Shaw is tall, robust, and healthy, has a ruddy color, clear eyes, and an elastic gait. He says: "There are two sorts of mankind: Those of higher and those of lower character. The lower craves meat. I do not like meat and never did." Also: "Daniel was a vegetarian, and after a time he became very handsome. That struck me at the time; I am not sure that it did not have something to do with my views."

Miss Marie Corelli is another English vegetarian of literary fame. She is a vegetarian because of her aversion to killing; the thought of taking life to satisfy the appetite is shocking to her. One has only to see Miss Corelli to realize that meat is not at all necessary to an appearance of roundness and perfect health, for, Miss Corelli is as plump and rosy as a child.

The Countess of Warwick adopted vegetarianism about a year ago, and people conjectured a good many motives for the action of this beautiful noblewoman. Some say she made the change for the sake of her beauty and figure, others, because of religious scruples, and still others, because she finds that her wits are clearer on a vegetarian diet. It is to be supposed that the reason first named has a good deal to do with it, and that Lady Warwick viewed with dismay the rapidly increasing flesh that threatened to destroy her beauty. Since she adopted vegetarianism, she has lost many

pounds and has regained her former slenderness and loveliness.

There are three famous French actresses who have, within the last ten years, become strict vegetarians, and one and the same motive prompted each one—the preservation of beauty and slenderness. They are: Réjane, Sarah Bernhardt, and Cleo de Mérode.

Madame Bernhardt does not eat even eggs, as they are a form of flesh food, and she takes no chances. She sticks to a simple, though widely varied, diet of dried and fresh fruits, nuts, cereals, and vegetables. Her only beverage is cool spring water.

Religious feelings solely have prompted three other famous women of Europe to give up the flesh of animals as food. They are Princess George, of Greece, who was Marie Bonaparte, of Paris; the Grand Duchess Serge, of Russia; and Madame Dieulafoy, the famous archeologist.

Auguste Rodin, the sculptor, became a vegetarian when he found that he could do much better work on a fleshless diet. His imagination worked more clearly and the general tone of his productions was higher.

Much the same motive prompted Madame Maeterlinck (Georgette Leblanc) to renounce the flesh diet.

In America, there are many famous vegetarians. Indeed, vegetarianism has of late spread among intellectual Americans to a surprising degree, owing chiefly to the advice given by certain scientific men, including Doctor Chittenden, of Yale, and Horace Fletcher. Doctor Chittenden asserts that the flesh of dead animals is not fit to enter the human stomach, that as soon as the spark of life goes out of an animal's body putrefaction begins, and one takes into the body matter in a greater or less degree decayed. So great a foothold has vegetarianism obtained that Congressman Longworth said recently that the increased price of leather was largely due to its spread.

Among the well-known people of the United States who are vegetarians, are Prof. Herschel Parker, of Columbia University, who is again to attempt the ascent of Mount McKinley this summer; Ella Wheeler Wilcox; Florence Morse Kingsley; Grace MacGowan Cooke; Upton Sinclair; Horace Fletcher; Edwin Markham; and Mrs. Robert A. Van Wyck, wife of the former mayor of New York.

Wu Ting-fang was converted while Minister from China, at Washington, and he

has made so deep and careful a study of a perfectly balanced diet that he declares that it will enable him to live to be at least 150 years of age, and perhaps even 200. He says, also, that it has cured him of many ills.

Senator La Follette is an example of a vegetarian politician. He is a rigid follower of a fleshless diet, having been converted to it for health's sake. He finds that he can do twice the work on a fleshless diet that he did before, and his head is vastly clearer. He has never craved meat since he gave it up several years ago.

Just here, we will try and brush aside certain false issues commonly raised concerning man's position in nature, as a feeder.

To our mind, it is not a question as to whether we are herbivorous or carnivorous animals. We are neither! The carnivora feed exclusively on raw meat; the herbivora eat raw vegetable material. The human is *omnivorous*, like the hog, and feeds as one (when he can). However, he stands apart from all the rest of creation, and should be more properly denominated the "cooking animal."

A. T. CUZNER.

Gilmore, Fla.

IMPORTANCE OF THE PATIENT'S TEETH TO THE PRACTICING PHYSICIAN

Common sense, it seems, would compel any thinking person even without instruction and without inquiring into scientific reasons, to keep his teeth in the best possible condition, inasmuch as his very life depends on it; for, teeth are indispensable for the sustenance of the human body, since without them food can not be prepared for the stomach to utilize. Still, even the practicing physician needs to be reminded, sometimes, that the teeth are essential guardians of health and often by their condition give the first indication of the presence of disease, so that, consequently, they are not to be left exclusively to the attention of the dentist.

At the time of the first dentition, the period of growing of the "milk-teeth,"—from about the sixth to the thirtieth month of age, the physician may be called to attend to a child presenting no more serious symptoms than restlessness, irritability, sleeplessness, the consequences of stoma-

titis, and may find a condition which at first he hardly would correlate with the teeth, as for instance, gastroenteritis, bronchitis, conjunctivitis, blepharitis, eclampsia, meningitis.

The tender age of childhood—sometimes as early as in the tenth month, and up to the school-age—is significant for a disease known as hypertrophy of the pharyngeal tonsil (commonly known as adenoids), which seriously obstructs nasal respiration and interferes with hearing, speaking, and mental development; while the consequent inadequate oxygenation of the blood gives rise to anemia with its many sequels. In many of these cases, if the hypertrophy has not been removed before the permanent teeth appear, the upper jaw becomes narrowed, and, in consequence, the hard plate is abnormally arched; with the further result that the teeth are not properly accommodated and the cuspids are pushed forward out of alinement.

If the distress and the symptoms caused by the adenoids are permitted to continue into the period of permanent dentition (the period between $6\frac{1}{2}$ and 13 years of age), it may happen that developing teeth break through the jawbone sideways and out of line, thus showing that the deformity of the jaw has no tendency toward correction. It is important to know, although sometimes disregarded by dentists, that such irregularly growing first teeth must not be extracted, because they contribute toward the proper development of the alveolar processes and thus correct the narrowness of the jaws, eventually being pushed out by the growing permanent teeth.

That the time and mode of development of the teeth is characterized by conspicuous changes in children afflicted with rachitis (rickets), is too well known for me to dilate upon. Cretinism, myxedema, later, tuberculosis, syphilis, diabetes, certain organic nervous diseases often are complicated with disease of the teeth.

Fortunately, when the children arrive at the school-age, the authorities look so very carefully after the health of those whom they teach, and so insist upon hygiene of their teeth that the children later will profit by their lesson. They will know that, when teeth are not good enough to be used for mastication, the bones and muscles of the oral cavity develop imperfectly, that even the external shape and the beauty

of the face will suffer, because inefficient teeth favor eating mushy food and thus afford no opportunity for a full development of all the facial muscles, because vigorous mastication is an unknown exercise and sport. To the healthy young person, extensive use of the teeth and oral muscles is an enjoyment.

The practicing physician also must not forget that a great number of adults past thirty years of age become afflicted with pyorrhea alveolaris (Riggs' disease), a chronic suppurative condition of the gums and alveoli, one rarely recognized in the early stage and which, in its later progress, detaches the gums from the neck of the tooth and so causes looseness of teeth, foul breath, digestive disorders, and numerous disturbances of an otherwise obscure etiology. There is no doubt that the constant swallowing of purulent matter from the mouth-cavity must cause infection in organs rendered sensitive by overuse or accidental injury and that cases of acute rheumatism, arthritis, endocarditis, nephritis, pancreatitis, duodenal catarrh, and disease of the gall-bladder can be explained as the direct consequence of neglected alveolar pyorrhea.

In addition to the most obvious ailments originating from the teeth, such as pulpitis, periostitis, parulis (ulcerating tumor that even may end in death, if neglected), there are many more conditions of the mouth that compel the physician's attention, and it is of the greatest benefit for the patient that the doctor consult and cooperate in all suitable cases with a competent dentist.

E. H. F. PIRKNER.

New York City.

ADENOIDS: THEIR PATHOLOGY, EXAMINATION, AND TREATMENT

It is only within the last quarter of a century that the medical profession has appreciated adenoid growths as a possible cause of nasal obstruction; and, while Dr. Wilhelm Meyer, of Copenhagen, described these vegetations as early as in 1868, yet, the profession as a whole did not realize their baleful influence upon the health of the child so afflicted until some twenty-five years later.

Pathologically, adenoids are the result of hypertrophy, or overgrowth, of the

lymphoid nodules normally present in the rhinopharynx. When this element alone is increased, the growth forms a soft spongy mass, but, often there is free development of connective tissue along with the lymphoid, and then the growths are firm and resisting. In some cases, atrophy of the lymphoid tissue takes place, and this may progress until the adenoid mass is greatly reduced in size; in consequence, relieving the obstruction in proportion to the amount of shrinking. Some authors believe that this process occurs only late in childhood or in early adult life; however, I know from personal observation that it is not uncommon in the very young.

When there is an abatement of symptoms in patients who have been suffering from adenoids, as they reach womanhood or manhood, I believe it to be due to the increased capacity of the epipharynx rather than to the actual reduction of the adenoid growths.

It is said by some writers that 95 per cent of children have adenoids. This may be a rather high estimate, but, there is no denying the fact that a great many of our children are thus afflicted, and that, also, they are encountered in all classes and conditions—among the rich, the poor, the high, the low, without exception. Thus, adenoids being found among all classes would indicate that there is a common causative factor, or perhaps factors.

It is well known that there is a strong tendency in all children to excessive lymphoidal growth. This, together with the irritation produced by gases and dust in the atmosphere, besides, often unduly cold air breathed, may be assumed to constitute the foundation for the excessive growth of lymphoid tissue; if now we add to these bacterial infection, which is almost certain to occur, you have the etiology of adenoids in a nutshell.

I have heard it asserted that adenoids are hereditary, but, I do not believe it. Were it possible for a new race of men to come into existence, free from all taint of heredity, they would most assuredly, acquire adenoids if they were to live in the same environment that children now do. Very rarely, children are born with adenoids, but, how early in uterine life these do develop we do not know; they have been found by me, however, at the autopsy of an infant stillborn at the seventh month

of gestation. If a child passes its fourth year without these growths appearing, in all probability it will not acquire them later.

In general practice, children afflicted with adenoids seldom are brought to the physician before the end of their first year. My own experience has been that the greatest number of cases come under observation in children between the ages of 1½ and 5 years. In a few instances, the symptoms are so urgent that an operation for the removal of the growths must be undertaken at a much younger age. Some physicians have operated upon infants only six months old.

The symptoms in a well-developed case are very plain. A persistent rhinitis—a habitual nasal discharge, now better, now worse—in a child usually is pathognomonic of adenoids. The rhinitis is worse during the winter. In those patients in whom the obstruction is great, the discharge never ceases, but, is worse when the child acquires an acute cold. The child that is seriously affected with adenoids can not blow the nose, its speech is defective, the voice has the nasal quality, and there is difficulty in pronouncing certain words.

In all advanced cases, there is mouth-breathing; this is not always due to large growths; a moderate-sized growth located in a small vault will have the same effect, because of its blocking the upper respiratory passage. The same mechanical obstruction causes the child to breathe through the mouth when asleep, with the consequence that it snores, is restless, and is continually changing position. When this condition has existed for some time, the contour of the face becomes changed and we have what some writers call an adenoid facies. The masseter muscles become so relaxed as to produce drop-jaw. These children have small nostrils and depressed nasolabial folds. Children that have large roomy vaults may have adenoids of considerable size and, yet, have not this adenoid facies. Cough is another symptom that usually is present in these cases; it may be mild or severe, according to the amount of irritation produced in the rhinopharynx. It may, also, be paroxysmal in character in some instances, and thus occasionally has been diagnosed as whooping-cough. A little patient was brought to me,

last winter, suffering from a habitual cough that began two years previously. The child had been treated by several physicians, but, did not improve. The cough always was worse when the child was lying down, keeping it for hours from resting. I found that this patient had a considerable mass of growths, but, there were few obstructive signs, owing to its roomy vault. The removal of the adenoids cured the cough.

Now as to the diagnosis—it is only in rare instances that the diagnosis is difficult to arrive at. The mouth-breathing, the snoring and restlessness at night, the persistent nasal discharge, the disturbed articulation, the inability to blow the nose, the stupid facial expression, the cough, the partial deafness, all go to make up a picture afforded by no other disease. If in doubt after considering the symptoms, clear up the diagnosis by making an examination.

To make a satisfactory examination in a very young child, is not a trivial undertaking. After the child has reached its fifth year, adenoid growths may be diagnosed by the use of mirrors and illumination, but, even at this age it is not always possible. I have seen it stated that certain physicians could make all necessary examinations by this method in children only two years old, however, I should prefer to see it demonstrated. I myself have worried by the hour with these little ones, trying to secure a view that would be convincing, only, in the end, to have to give up in dismay.

During the last few years, I have absolutely discarded this method of indirect examination in the case of children under six years of age and now rely upon the method taught by Professor Gilmore Kerley. I acknowledge that this method is very disagreeable to the patient, also to the parents, if they are present, but, it can be done quickly and the knowledge gained can be relied upon.

After the hands, especially the fingers are made aseptic, with the patient securely held with its arms pinned to the sides, a tongue-depressor or a mouth-gag is placed between the teeth, at right angles to the jaw, and held in place by the left hand of the operator. The right index-finger is then passed up into the rhinopharyngeal

vault and the condition of the latter accurately and quickly determined. The presence of adenoids gives to the finger the sensation as of touching angleworms.

As for the treatment, if the physician has satisfied himself that adenoids are present and that the obstruction is urgent, he should so advise the parents, and tell them that the only cure is, the removal of the growths. But, let it be understood that all cases of adenoids do not require surgical interference. In a certain percentage of cases, the growths are small and do no perceptible damage. Should the child be less than one year old and symptoms urgent, it is best not to attempt radical extirpation. The infant can be relieved by the following method. Have the nurse securely hold the little one; the hand of the operator must be thoroughly clean and aseptic; the index-finger-tip should be covered with two or three layers of sterile gauze. The finger now is passed into the vault and with the gauze-covered tip the soft spongy growth is mashed or crushed or broken up. It is wise to tell the parent or nurse that there will be bleeding, but, this usually is very slight. The adenoid tissue in these little ones is very soft and friable, and, by this operation, and the sloughing that follows, the objectionable symptoms are relieved for a long time. Still, as a rule, within one year and sometimes sooner, the symptoms return and a radical operation should then be performed.

Physicians should endeavor to educate the mothers not to hesitate to have their children freed from these abnormal growths, not only for the relief afforded, but, for the betterment of their general health.

C. W. CANAN.

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THE DIAGNOSIS AND TREATMENT OF ADENOIDS

In Doctor Canan's excellent discussion of the subject of adenoids (this issue, p. 61), the treatment of this important cause of ill-health in children has been dealt with in a somewhat scant manner, so, I desire to present for consideration a few additional remarks on the therapeutics of the problem. Before doing so, however, it may

be well first to enlarge upon the question of diagnosis.

The method of digital exploration, which Doctor Canan recommends, is effective, no doubt, and at the hands of an experienced physician or surgeon will afford definite information. Nevertheless, it can not be denied that it is rather brutal and that it serves to arouse in the mind of the youngster a fear of physicians that may never after be overcome. I agree with G. F. Still, who points out, in his book, "Common Disorders and Diseases of Childhood," that this procedure is justified only in the presence of unquestioned indications of existing adenoid vegetations, and then it should be undertaken solely for the purpose of establishing definitely the necessity of surgical interference.

In the course of a clinical lecture on adenoid vegetations in the rhinopharynx (*Internat. Clinics*, vol. VIII, 1903), Dr. J. Morrison Ray demonstrated that a diagnosis of adenoids may very well be made without digital examinations, namely, by exclusion. Ray remarks that one of the most frequent causes of mouth-breathing is, obstruction in the rhinopharynx; so, when a mouth-breathing child is presented for a diagnosis of the trouble, the first thing to be done is, to look into the mouth, nose, and rhinopharynx. By careful examination of the mouth, the tongue-depressor being inserted in such a manner as not to frighten the child, the condition of the pharynx can be ascertained, and it can be determined also whether or not enlarged tonsils explain the mouth-breathing. If this examination gives negative results, the nose will be examined with the aid of a small speculum. Supposing, now, that the septum is virtually in the medium line and the turbinates are not sufficiently congested to obstruct the nasal passages, we need be forced to refer the cause of the child's mouth-breathing to the rhinopharynx. Thus, the diagnosis is made by exclusion, while enough has been discovered for us to initiate a course of treatment looking toward the improvement of the little patient's general condition, which, in itself, may be sufficient to overcome the pathologic state of the rhinopharynx and without surgical intervention.

If a diagnosis of adenoids has been made, whether direct or by exclusion, it becomes

necessary to determine upon a course of treatment. I do not agree with those who maintain that adenoids should be removed at all events, being of the opinion that the attempt should be made to aid the organism in its endeavor to rid itself of the excessive cell proliferation, for the reason that there exists a physiological tendency in the body to counteract any abnormal events and developments. Moreover, it is to be taken into consideration that lymph-cell proliferation is peculiar to early childhood to such a degree that it may almost be called normal at that stage, and that there is a tendency for it to diminish during puberty.

It has been found quite possible, by means of suitable nonsurgical treatment, to enable the body to rid itself of excessive lymph-cell vegetation, and many times such growths have been seen to become smaller without resort to operation. Naturally, this takes time, and, so, the necessity for operative interference may arise in cases in which the adenoid growths are so bulky as to interfere with the normal functioning of the upper respiratory passages. As long as they do not impair the health of the child, however, their operative removal is not called for.

This position is strengthened by the peculiarity of the child's organism that under the influence of excessive lymphoid proliferation, it is especially sensitive to shock from anesthetics. Yet, an operation for adenoids should never be done without giving an anesthetic, because it is a brutal operation, at best. The giving of the anesthetic by no means is without danger, and many cases of sudden death are on record which are to be attributed to shock from the anesthetic; this being true especially for subjects of the so-called status lymphaticus. It follows that before operation is undertaken efforts should be made to remedy the existing abnormal conditions in other ways.

According to G. F. Still it is to be remembered that both the rhinopharyngeal and the faucial tonsils undergo involution after puberty, and this even where there have been catarrhal or inflammatory symptoms which might be thought to entail fibrous changes in them. While, no doubt the presence of such fibroid inflammatory changes renders the involutionary process after puberty less than it

otherwise would be, the occurrence of two or three attacks of tonsillitis, or of repeated "colds," as so often happens in those with adenoids, does not preclude the possibility of considerable diminution in the size of these structures after puberty.

If, therefore, adenoids or tonsils are producing no symptoms or are associated with symptoms not of serious gravity, there is no occasion to rush into operation.

It may happen that further enlargement of these structures occurs and produces symptoms that make the operation necessary; but, at any rate, the harm of waiting until this occurs is less than the harm of performing an unnecessary operation.

This position is well supported in medical literature. Thus, Forchheimer was of the opinion that, if the patient is not in good general condition or is anemic or a bad feeder, proper treatment should be instituted, this consisting in the internal administration of creosote or syrup of ferrous iodide, either one or both, and resulting in diminution in the size of the external lymphatics, possibly also of the adenoids; besides, usually within forty-eight hours, in increased appetite, thus rendering the use of codliver-oil unnecessary.

Forchheimer adds, however, that the great improvement which usually follows this medication frequently tempts to postpone operating. In his opinion, this is not to be encouraged when the other external conditions are favorable, as the child now is in the best condition to bear the appreciable loss of blood always incident to operation.

According to the late Dr. A. C. Cotton ("The Medical Diseases of Infancy and Childhood," 1906, p. 230), when the adenoid is small or appears as a somewhat acute growth, medicinal and hygienic treatment may arrest its development or, even, occasionally cause marked shrinkage. Guaiacol carbonate, 1 to 3 grains four times a day; syrup of ferrous iodide, 5 to 15 minims, three times daily; or syrup of hydriodic acid 15 to 60 minims three times daily, may be given during alternate weeks for a period of several months. Anything, Cotton continues, that tends to interrupt the vicious circle of which adenoids form

a part retards by so much the latter's growth; hence, protection from catarrhal infections by attention to clothing, climate, and ventilation must be secured, together with prompt treatment for the relief of acute angina and rhinitis. Nutrition must be maintained to the highest degree by the best-known hygienic measures, special attention being directed toward any tendency to rachitis and other nutritional disorders. In this connection, the services of the physician are rarely more valuable than during convalescence from the contagious diseases of infancy and childhood.

The question of early orodental surgery, to correct facial, palatal, and nasal deformities due to prenatal or hereditary influenza, seems worthy of consideration in this connection.

Layton (*Lancet*, 1914, vol. I, p. 1106) expresses objections to indiscriminate operating for adenoid vegetations, claiming that it is better, when possible, to remove the cause of the enlargement and inflammation. He recommends attention to teeth and exercises for nasal breathing, finding that often operation becomes unnecessary. Ashby (*Brit. Med. Jour.*, 1913, vol. I, p. 1159) believes that adenoid hypertrophy is an attempt to make up for deficiency in the other lymphoid tissue of the body. Accordingly, he has treated these cases with lymphatic-gland extract and believes he has obtained good results. Stewart (*Brit. Med. Jour.*, 1913, vol. I, p. 1157) reports good results from x-ray treatment. Netter (*Internat. Med. Ann.*, 1914, p. 29) has found nasal injections of a 1:100 colloidal silver solution successful in children who were suffering from adenoids.

No matter what has caused the occurrence of adenoid vegetations, they very soon become subject to bacterial localization, with its resulting toxemia. Even this may be sufficient to account for the clinical symptoms. Unless the adenoid growth is excessive, it is proper to attempt medicinal and general treatment; calcium sulphide, to overcome infection and intoxication, supplemented, if necessary, by echinacea, and also other preparations of calcium. The purpose is, to counteract excessive proliferation of the lymphatic tissue. Iodine, also, may be given for this purpose; while for the alternative

effect guaiacol and other creosote-preparations have been recommended.

It goes without saying that in cases of bacterial infection and intoxication suitable bacterins are indicated, for the purpose of allaying inflammation and other abnormal conditions resulting from the invasion and localization of pathogenic microorganisms.

At all events, it is incumbent upon the attending physician to ascertain and remedy all those abnormal factors that may stand in causal relation to the occurrence of adenoid growths. It has already been said that carious teeth may be productive of lymph-gland enlargement; it having been found that in mouth-breathing children it is exceedingly frequent to find carious teeth and decayed stumps. In such a case, the removal of the adenoid vegetations, without further attention, manifestly would not be productive of much good. Proper treatment of faulty teeth and of diseased gums and the removal of teeth and stumps that can no longer be repaired may be all that is required to restore the child to health.

Finally, the possible luetic factor in the etiology of adenoids must not be lost sight of. Quite recently Professor Marfan, of the medical school of the University of Paris, reported that in a series of 57 cases of adenoids in infants under two years of age congenital syphilis stood in causal relation in 28, and it was a probable factor in 16 others.

When careful and sufficiently prolonged medicinal and general treatment is ineffective toward relieving the abnormal conditions due to the presence of adenoid growths, or when these give rise to symptoms that indicate injurious consequences to the health or welfare of the patient, surgical removal must be considered. This is true, especially if the growths cause trouble in the auditory, respiratory or nervous systems, as for instance, recurring earache, and, still more, the slightest degree of deafness, even if it recurs only when the child has a cold. In very young children, adenoids should be removed if nursing or proper feeding is interfered with; if some of the symptoms referred to already are in evidence or if development is markedly impeded.

Operation being determined upon, it should be held in mind that the surgical

treatment of adenoids is not a simple operation and that it may cause a great deal of bleeding. The technic of the operation does not concern us here; suffice it to assist that it should be perfect in every way. As to the anesthetic, however, I wish to suggest the advisability of employing the nitrous oxide and oxygen anesthesia as most suitable for this operation. This, in view of the fact that ether and, in a less degree, chloroform have not infrequently given rise to collapse and even death in cases of the status lymphaticus. It is further suggested to consider the advisability of employing the hyoscine-morphine combination, instead of a volatile anesthetic, as being, perhaps, even less dangerous than the nitrous-oxide and oxygen gas. In this event, however, the child's tolerance to morphine should be ascertained before relatively large doses of this alkaloidal combination are administered.

H. J. ACHARD.

Chicago, Ill.

EXPERIENCES WITH LOBELIA

As for experiences with lobeline, which you call for, I have had none in my practice, but, in the words of our good "cousin," the druggist, I can give you something just as good—that is to say, my experience has been with the subculoid lobelia. Let me cite from my case records.

Case 1. On June 28, 1915, I was called to see Miss B., aged 34, clerk, family history negative. Two weeks before that she was seized with a pain in the back of her head. The next morning, she had an attack of hematuria, accompanied by severe pain when urinating. This pain continued, and there was a constant urge to urinate, the longest possible that she could hold her water being twelve minutes. On the morning of June 27, she had a chill, which lasted an hour and a half, this being followed by fever and pain in the region of the left kidney. Her medical attendant treated her for grip.

Arriving, I found the patient in a stupor, probably under the influence of morphine. Her temperature was 101° F., the pulse 84, and she was in pain. There was much tenderness over the left kidney. The urine was smoky, acid, contained a trace of albumin, but, no sugar. Microscopical examination revealed: uric-acid crystals,

finely granular casts, motile bacteria, a few red cells, and bladder-epithelium. A colleague whom I took along diagnosed the case as one of colon-bacillus nephritis. My diagnosis was that of pyelonephritis due to calculus.

I administered hypodermically 20 minims of subculoid lobelia. This gave prompt relief. I also prescribed hexamethylenamine.

The following morning the patient was no better. She had spent a restless night. Temperature 102° F., pulse 80. Again I gave a hypodermic injection of 20 minims of lobelia, and again relief was prompt in about five minutes. At noon, the temperature rose to 103.6 degrees, and the patient again was in agonizing pain. I administered 60 minims of the lobelia hypodermically. In five minutes, the pain lessened and in two hours it disappeared entirely from the region of the kidney; the irritation in the bladder, however, became more pronounced. A blood-count made at this time showed 16,000 leukocytes. The evening temperature was 104 degrees, but, patient was free from pain. The next morning (this being after three days of the lobelia-medication), the temperature went down to 102 and in the evening to 101° F. The following morning, the nurse presented me with two renal calculi passed by the patient during the preceding night, one being about 1-5 inch in diameter and 1-2 inch long, and the other about 1-3 the size. A third stone also was passed, but it was lost. Following this, the patient recovered from this attack, but, was left with a nephritis that required two months' treatment to effect a cure. An x-ray picture disclosed no more stones present.

A long-continued unpleasant symptom that followed the hypodermic injection of a 1-dram dose of the lobelia was that of vomiting, this being aggravated while the patient was removed from her room to the hospital, and which continued throughout the night.

Case 2. On September 10, 1915, I was called to see Mrs. Z., aged 47, housewife. family history negative. About a year ago, she began to be troubled with enuresis, had to get up about five times every night. Three months ago, she had an attack of pain in the region of the right kidney. With this, the frequency of urination in-

creased. Two months later, her pain became worse and assumed more of a colicky nature. For the last ten days, she had a constant desire to urinate. I found her in agonizing pain and unable to urinate, so that I had to catheterize her. Temperature 99.5° F., pulse 80, tenderness over the right kidney. Urine: gravity 1004 (she had been drinking large quantities of water), acid, no albumin, a few bladder-epithelia. Diagnosis: Renal calculus.

I gave her 20 minims of subculoid lobelia hypodermically; also, hyoscyamine, 1 granule (1-1000 grain) every half hour. This kept the pain under control. On the 13th, I was called again and found the patient in severe pain and very restless. Gave 40 minims of the lobelia hypodermically. This relieved the pain. In the evening, there was profuse hematuria, and with this the pain in the region of the kidney disappeared, but, a sense of heaviness was felt in the bladder which lasted several days. An x-ray picture, taken on the 15th, did not show any stones.

Case 3. Mr. M., aged 42, five years ago had an attack of lumbago, which was relieved by an Osteopath. A year ago, he had another attack, which yielded to local applications. On October 14, 1917, I found the patient complaining of pain in his back, this radiating to the right leg, and being aggravated by movements. When extending the leg and flexing the thigh upon the abdomen, severe pain was felt at about the sciatic foramen. The prostatic gland was found enlarged, soft, and quite tender.

I applied the static wave current over the prostate gland, which afforded some relief. I did not hear from him for a week. On the evening of the 21st, I was called to see him. He had had osteopathic treatment during the week, with some temporary relief; but, he was making no headway and now the pain was becoming unbearable—he was unable to move. The pain was of a colicky nature and was localized over the right kidney, radiating to the groin and down the front of the right thigh.

I gave him 25 minims of the lobelia hypodermically. The relief was prompt. The pain disappeared and he was able to move. At about midnight, I was called again. I gave him 50 minims of the lobelia hypodermically. This produced some

nausea, which lasted about an hour, but, it relieved the pain and gave him a good night's rest. About 9 o'clock the next morning, the pain was slight. I gave a hypodermic injection of 25 minims of the lobelia. This dose was repeated at about 5 p. m. About 11 p. m. I gave 50 minims hypodermically. On the morning of the 24th, I gave him another hypodermic of 25 minims of the lobelia. The pain was virtually gone, although some local tenderness still remained.

An analysis of the urine, made on the 22nd gave a negative showing, although a considerable number of red blood-cells were present.

I have also prescribed lobelia successfully in asthmatic conditions, but, I believe its use in asthma is too well known to require any report.

LOUIS I. BOGEN.

Lincoln, Nebr.

LOBELINE, MORPHINE, BLOODLET- TING IN PUERPERAL CON- VULSIONS

Answering the question raised by Doctor Junger in the November number of *CLINICAL MEDICINE* (p. 838), regarding the use of lobeline in puerpal convulsions, I would advise against its use, for several reasons; first, it is not indicated in that disease, and second, its effects are too uncertain for it to be used in such a serious condition, when we have other remedies the effects of which are certain and almost specific.

I would also advise against administering poisonous doses of morphine and other narcotics into a patient whose system is already overloaded with toxic material; and I would especially make an earnest protest against the use of chloroform for controlling the convulsions, for, it can do no possible good and may do an immense amount of harm.

So, then, I would tell Doctor Junger, if he should be called upon to treat another case like the one he describes, first of all to bleed the patient to effect, that is, till the pulse begins to soften a bit. Next, if the pulse remains too rapid, to give a hypodermic injection of Norwood's tincture of veratrum, repeating the dose once an hour till the pulse comes down to normal. Then start elimination by placing about

20 grains of calomel on the back of the patient's tongue. Then give a rectal injection of epsom salt and glycerin in a quart of hot water. If labor has set in, this will hurry dilatation, and empty the lower bowel.

If dilatation is not going on satisfactorily, heat about a pound of petrolatum and dip a 5-yard roll of sterile gauze into it, then with a large retractor and dressing-forceps pack the cervix and vagina full, applying a pad to the vulva, and leave it in for an hour or more. When you remove the packing, dilatation usually will be complete. After using this method once, you will never, never again employ the nasty manual method of dilating a cervix.

By this time, your patient will be free from convulsions and awake. If so, then is the right time for a hyoscine-morphine injection, and, as soon as the effect is marked, deliver your patient. A little later, a dose or two of salithia will leave your patient in good condition.

In a practice of thirty-two years, I have never yet seen a patient have a convulsion after an effective bloodletting, and the beauty of this measure is, that it can do no possible harm. The same can be said for veratrum for controlling too rapid heart action.

W. A. MARNER.

Miles, Iowa.

THE YEARS CREEP SLOWLY AWAY

Emerging from the valley and shadows of death! The mere idea is lugubrious. Have any of you come out? Such is of my recent experience. I have two wounds across and just under the base of the skull, no more penetrating than of the fracture type. Well! I am in the office, but then, this annual greeting nearly passed a blank. I do not know the length of my comatose state. The natives think I was dead. Strange, they did not bury me!

Ominously the dull and heavy thud of eighty-eight years completed in my pilgrimage struck the weird knell tonight.

This greeting took formation a year ago, with Zapata bands devastating and murdering in the hamlet of my paradise home, whose habitants fled, till but a mere shadow of the "Deserted Village" remained.

In February, they sacked my house. To escape being held for ransom, I fled in

borrowed rags to Pichucalco, without hat or shoes, in the night. I had a big stock of medicines in Coast Custom House, which came here at once. Three days later, this city was taken by storm and sacked.

Just at day break, when the rebels entered the public square, firing ceased. I opened my door. No one was near. They were breaking open the stores in the square. I stepped out. There were two men at the lower end of my corridor, some hundred yards distant, in the act of turning to come back. One of them yelled to me: "Doctor, what are you doing in this hell of —." Then he ran quickly toward me, and grasped my hand with both of his so that it ached for an hour after.

"You don't remember me," he went on, "but, I remember you, because you are little changed, though forty years have passed and we now are here in this sulphurous smoke. I remember the service you rendered a stripling lieutenant of the line in the state of Michigan. I am General De L—, commander of this post. We have taken the city by blood and fire, and the commerce will be sacked; but, you will not be harmed, Doctor Gray—ask of me whatever you wish."

"Nothing, I wish general," I answered, "but personal protection for innocent pacificos."

"Not even civilian employees of Carranza will be molested, and families will not be disturbed," came back. And so it was.

The only inconvenience to me was that I had to fix up the wounded, a matter of two days and a night, I being the only doctor in the place then.

Carranza's troops were dead, only a few wounded ones had escaped in the early darkness. The dead were burned in great heaps in the public square.

The drug establishment of my friend Doctor Maldonado was left completely empty. He was absent with his family, as also were many of the merchants and other prominent people who had fled this section when the Zapata contingents arrived in the vicinity.

The men who took this city were of the upper classes, rallied under the auspices of Felix Diaz, presuming that Carranza was going in alliance with Germany, and that they would attack him in the rear, while the United States pressed the front, finish

him in short order, get recognition, and annul the alliance. But, they were not fifty miles from here when news came of the American declaration of war against Germany and Carranza's rejection of any alliance. Thus stopped the advance and the volunteering. The army broke up into detached bands, while Diaz found it advisable to leave the country.

After that army had left here, not a guard remaining, twenty days passed before federal troops arrived, and a panic of terror that bandits would enter caused the people to flee, until I was the only person remaining who slept in a solidly built central street, nearly a mile long, for fifteen nights.

Since the capture of this city of Pichucalco, the 4th of April, we have passed most of the time practically under a state of siege, owing to river-pirates and the roads being held by, or subject to, rebels, though not menacingly near.

It is now five months that I have eaten no meat, three months since I gave up eggs. My breakfast consists of a small plate of oatmeal, a small biscuit, and a cup of coffee with a teaspoonful of sweetened condensed milk. For dinner, I have three spoonfuls of rice, a yuca tuber—about equal to your potato, a piece each of pumpkin and plantain, a tortilla, and a cup of black coffee. Supper consists of the small biscuit and a cup of chocolate with a teaspoonful of condensed milk. Purely as a question of nourishment, I am more comfortable than any guest of a first-class hotel. I usually eat three or four bananas every day, and an orange occasionally. Hundreds of thousands in this country live on small rations of tortillas and black beans. It is sheer nonsense to suppose that you people in the states are in danger of famine, to which we have been long accustomed.

Should you suffer a proportionate sacrifice of life, in your European struggle, to what the long roll of revolutions has cost us here, you will have at least 3,500,000 of your people dead.

It may be well to imagine this broad Mexican shambles mere child's play; and no more than a daily average of 235 from such far-spreading fields of conflicts does seem small; yet, such loss from a 15,000,000 population through a long lapse of multiplied days, is no bagatelle. The rule has been to take no prisoners; and half the

deaths have been of pacificos, for vengeance.

A universal deluge, that came from the United States and northern Mexico, has held sway here half a month, suspending traffic and military operations, and many people have been drowned.

I really regret that my idealistic possibilities for the redemption of Mexico, as written down three years ago, have failed to materialize; yet, they might have, under a liberal dispensation, eventuated in the hoped-for prosperity of Mexico by today. Our political tendency is hellward, when a few prudent concessions would lead to peace. They are not made, while provocations are never wanting.

Some 20,000 federal troops are in this belt, against Mexico's most formidable revolution of the time, and never yet suppressed. Before the flood, their mountain strongholds, herds of cattle, and vast plantations of corn had been captured and the ammunition exhausted. Now, after a week without rain, the government troops are beginning to move and something serious may happen. From 20- to 30,000 rebels can not live long on mountain solitude. They have no other territory. They can not try to forage.

Loss of blood was my most serious damage. In case my lot and part are in these tragic scenes next year, maybe I shall tell you all something. But, long ere that recurrence you will have sorrow and wo too much at home.

ROBERT GRAY.

Pichucalco, Mexico.

[Doctor Gray has passed through so many vicissitudes of war, revolution, famine and other popular upheavals unharmed, that, to us, he seemed to possess a charmed life. All the greater was the shock of learning that he had been wounded. The readers of CLINICAL MEDICINE, who, like ourselves, have come to love the lonely old doctor and who, like ourselves, read his stories, quaint, unusual, and—sometimes—weird as they are, with eagerness, will sympathize with him in the necessity to undergo personal injury in addition to all the hardship he has already suffered. We all extend to him our sympathy and our sincere wishes for better things.

It is to be kept in mind, that "The Old Doctor's Life Story" which is running

serially in this journal, was written several years ago; while this present letter was received only last month.—Ed.]

OPPORTUNITY—LOTS OF IT

The editor of *The Dental Review* has found a gold nugget, a poem signed "B. Braley," while otherwise, without any indication of paternity or birthplace. We do not know, any more than does the editor of our contemporary, where this poem may first have appeared or who B. Braley is. Nevertheless, we reproduce it here, because it is so good that it should be passed on all over the world. Read it and see whether we are not right. The title of the poem is "Opportunity."

With doubt and dismay you are smitten,
You think there's no chance for you, son?
Why, the best books haven't been written,
The best race hasn't been run;
The best score hasn't been made yet,
The best song hasn't been sung;
The best tune hasn't been played yet.
Cheer up, for, the world is young!

No chance? Why the world is just eager
For things that you ought to create;
Its store of true wealth still is meager,
Its needs are incessant and great;
It yearns for more power and beauty,
More laughter and love and romance,
More loyalty, labor, and duty,
No chance? Why there's nothing but
chance!

For, the best verse hasn't been rhymed yet.
The best house hasn't been planned;
The highest peak hasn't been climbed yet,
The mightiest rivers aren't spanned.
Don't worry and fret, faint-hearted,
The chances have just begun;
For the best jobs haven't been started,
The best work hasn't been done.
—B. Braley.

MUST HEROIN BE DISCARDED?

I had thought sometime ago that I would say a word about heroin, but, forgot it until Doctor Keller reminded me. I think well of heroin. For years, I have used it many times more frequently than I have either morphine or codeine. I don't think I have given a dose of morphine in five years, except in combination with hyoscine.

Heroin has a marked action in allaying acute irritation of the trachea and bronchi. It soothes restlessness not due to pain. I never get nausea from its use, nor constipation unless in unusually large doses.

I never saw a heroin-addict, although using it at all ages, from birth to old age. I know no drug that I could substitute for heroin; so, let us retain it, for, it is valuable.

A. E. SMITH.

Utica, Ohio.

THE EVILS OF HEROIN

Having carefully read the article, "Must Heroin Be Discarded?" in the November number of *CLINICAL MEDICINE*, and realizing the evils that such suggestions may lead to, I feel it my duty to reply. For several years, I have given all my time to the study and treatment of narcotism, in a hospital wholly devoted to this class of work, and am, therefore, familiar with the uses and abuses of narcotic drugs.

I will admit at the outset that heroin "has been exposed to its periodic attacks;" and, to one acquainted with the evils attending its use, such an "attack" at this time seems appropriate.

At the inception of the use of heroin, it was widely heralded as a valuable palliative for various kinds of irritation of the air-passages; and it was considered a safe drug. It even was suggested as a safe substitute for morphine in the cure of the morphine-habit. When any drug is proclaimed as a safe and sure cure for any disease or class of diseases, it always meets with a kindly reception both from physicians and the laity. This occurred on the advent of heroin.

As compared with morphine and codeine, dose for dose, heroin is three times as strong as the former and six times as strong as the latter. This is not its comparative strength clinically, however.

A larger amount of heroin is excreted by the kidneys than is of morphine; while nearly all of codeine is eliminated by the urinary apparatus. Heroin has less power to promote sleep and to diminish pain than has morphine.

Upon the organs of respiration, it acts as a severe depressant. Heinz says that it is five times as depressing to respiration as morphine and thirty times as depressing as codeine. Experiments with rabbits have shown that the number of respirations were, in forty minutes, reduced, from 120, to 18 per minute; and the volume of inspired air was reduced from 880 C.c. per

minute, to 240 C.c. In many patients, I have observed this depressing effect on the respiration.

I would consider, from my observations, that the active effect of heroin upon the intestines is about that of morphine; while that of codeine is not marked.

The action of opiates upon the heart is not of special moment, and need not be considered here.

The power of heroin to produce reflex excitability is greater than that of morphine.

In cases of heroinism, the physical and mental torpor is more marked than in morphinism and the consequently lowered resistance more pronounced. An advanced stage of narcotism obtains earlier in heroinism than in morphinism and its victims reach a lower state of hebetude in the former than in the latter. I have in mind the case of a strong man, physically and mentally, whose weakness equaled that of one ill with a fever.

In its power to overcome pain, to allay cough, and to induce sleep, codeine is preferable to morphine or heroin, when its effectiveness is considered and its freedom from liability to induce the habit is weighed. While there is a possibility of its inducing the codeine habit, this is not so easily acquired and is more readily broken; but, the danger of habit-formation is always possible when any opiate is used, even in small doses and, for only a short period.

About 10 percent of the several hundred narcotic cases I have treated have been heroin-habitués. The classic symptoms of morphinism, with which all physicians are familiar, are found also in heroinism. The difference as to mental and physical weakness is marked; this is especially pronounced in the latter and, the convalescence is more prolonged.

The power of heroin over pulmonary and laryngeal irritation is conceded; but, here, if an opiate must be given, codeine is to be preferred.

As the heroin-habit is easily acquired, its dangers pronounced and unavoidable, and its victims numerous, it is unsafe even to consider "why discard a distinctive, active, successful therapeutic agent simply because it has been misused by someone, somewhere, three years ago?" To one more familiar with its dangers and having

in mind the number of heroin-habitués, its therapeutic employment will be more seriously considered than in the article referred to. It has all the disadvantages of morphine and more danger; and, the deprivation of heroin is more painful than is the withdrawal of morphine.

The Harrison Law has favorably reduced the number of narcotic victims; and now a duty devolves upon all physicians to see to it that further use of narcotic drugs is kept at a minimum amount. To say that a patient does not know what he is taking, is an unsafe position to take in the use of narcotic drugs, inasmuch as such use may engraft upon the innocent user a dangerous habit, with all the attending evils. An opiate is always an opiate—heroin being the most dangerous and codeine the least so—and is never safe from the standpoint of habit when used for two weeks or more, even in minute doses. Therefore, their employment must always be weighed as to its necessity, which one is to be advised, and the length of time to be given.

GEORGE R. CATE.

Brookline, Mass.

[Doctor Cate advances a strong argument in favor of the position taken editorially last September (p. 625). It seems that physicians familiar with drug-addiction are in favor of abolishing heroin. Are there any more opinions to be voiced?—Ed.]

AS TO LUMINAL IN MORPHINE-ADDICTION

Doctor Price, in the July issue of *CLINICAL MEDICINE* of last year, under the heading of "Morphine-Addiction and Its Cure," makes the following statement: "However, six days later I waked up and found myself in bed." It seems that luminal is a wonderful drug and is capable of producing a deep and a comfortable sleep for a variable length of time, without causing any distressing symptoms, such as delirium, restlessness, or even coma.

However, Doctor Price failed to mention several important facts connected with that sleep; that is, when the patient gets just enough luminal to keep him in a dormant state, (1) whether he must be constantly watched for changes in respiration or circulation, or whether there are any

such changes. (2) How about the urinary and anal sphincters—is there any incontinence of urine or feces? (3) Nothing is said about the feeding; whether he was nourished in that time, and how.

This is not written in derogation. I merely ask for more explicit information, for, Doctor Price's article is interesting and informative, not only to myself, but, I believe, to many other readers of *CLINICAL MEDICINE*.

M. WOLLIN.

Bronx, N. Y.

[Doctor Wollin's letter was referred to Doctor Price, who replied as follows:

"I could hardly state in one short article all that might have been said, and many correspondents have written to me about this treatment, from one side of this continent to the other, and as far away as Korea. I will briefly answer the Doctor as fully as possible.

"1. Yes, there are such changes that must be looked after. I have been in the sanitarium and seen patients go through this treatment since I took it, and have noted many changes. However, there was nothing particularly alarming about it. A lady from Alabama writes me that she took her husband through a course of the treatment and cured him.

"2. The patients get magnesium sulphate when needed. The elimination is kept up as a part of the treatment, and this is attended to by nurses. No incontinence of urine or feces ever was observed.

"3. Patients can be aroused sufficiently to give them food. One patient, who had been overdosed, had to be fed through a tube. Milk, soup, oatmeal is the diet in ordinary cases. Digestion usually is undisturbed and any food that can be swallowed will be digested.

"I wish to explain that I am in no way interested in the treatment of these patients, save to see every one of them cured safely and pleasantly. Furthermore, this is the only treatment worthy of the name. In a few days, you wake up well, and that is all you know about it; and you stay well, and this is the blessed part of it. There were 16 patients in the sanitarium with me; we all went away cured, and more or less have had the consciousness of this pleasant experience month after month since. The remedy seems to be all right in every re-

spect. You never crave another dose of the narcotic."—Ed.]

FEBRILE RECURRENT HEADACHE

In reading Professor Gougerot's article on headache, on page 811 of the November number, I was sorry to find that he had overlooked one of the leading causes of headaches, namely, congestion in the nasal accessory sinuses. This form can be quickly relieved by using a Gradle or Brawley suction-apparatus, while the secretion collected should be examined for the germ or germs causing the trouble, and then the proper vaccine used. Also, the new oil-spray of dichloramine-T would be of value for keeping the fossæ clean. Any physician can employ this simple treatment, which also is very useful in colds. Shrink the turbinates first with adrenalin.

F. A. WIER.

Madison, Wis.

[It is well to keep in mind the cause of recurrent headaches, as mentioned by Doctor Wier. We believe that congestion in the accessory nasal sinuses, especially if owing to bacterial infection, may be a fruitful source of meningeal involvement; and this may give rise to the kind of headache described by Professor Gougerot, especially if the infection is only slight. If it often recurs, or is very severe, decided pathological disturbances in the meninges would have to be expected, with correspondingly severe, and serious, symptoms. Since trouble in the accessory nasal sinuses is almost invariably of bacterial origin, the advice of Doctor Wier, to employ spray-treatment with dichloramine-T, is a very excellent one.—Ed.]

CHRISTIAN-SCIENCE HORRORS

Every day we read in the newspaper about some person who has died, for the lack of proper medical attention, at the hands of one of these so-called healers, not a physician, for, this term means too much to be applied to a class of persons who are so brutal and skeptical that they let people die when they might probably be saved if a reputable physician were called. I wish to tell of a case that occurred here:

A child was taken sick with diphtheria, and, the parents, being of the Christian

Science faith, of course called a practitioner, to use his "spiritual powers" to heal the child. The child died in about forty-eight hours. No report of the case had been made to the health department, nor to any city physician or official. The death was reported by some neighbor. The health department and coroner at once made an investigation and found the child had died of diphtheria. The Christian Science practitioner and his wife, also the father, were hauled into court and asked for an explanation. They said they did not know what diphtheria was, but, that it was not contagious. The father of the child gave some excuse, also.

This is surely a bad state of affairs and some legislation should be forthcoming to put a halt to such barbarous doings. It is high time that physicians get together and impress upon their representatives in legislature or congress to enact laws that would force these Christian Science practitioners and drugless healers to report each and every case of communicable disease to the health-authorities at once, so that the patient can get the proper treatment.

Had the Lord intended for the sick and afflicted to be healed by miracles or by drugless practioners, he would have never instructed the doctors in the temple. The herbs and roots that are turned into our drugs and are administered to the sick would never have grown. There would have been no need for them. Did the Lord instruct Mrs. Baker Eddie to start a new religion—I mean, a comedy farce—that scorns the physicians, that "knocks" in every way possible the medical profession and the drugs? If he did, then the Bible and the religion we have been taught is a mockery.

I had occasion, some time ago, to attend a Christian Science service. A talk was made by one of the so-called practitioners, and he "roasted" the medical profession from A to Z, and in no good terms. My blood began to boil and I got out very quickly or I would surely have connected myself with the so-called practitioner in a way that either he or I should have remembered for some time to come.

In the name of the profession we represent and for the sake of humanity let us get busy and have some law passed that will eliminate this class of people, and, if they let a patient die, see to it that they

are punished in the severest manner. Their ignorance is no excuse, yet, by pleading, they save themselves from prosecution, while also claiming that the Bible is authority for their belief and their practice.

H. SAMPSON.

Gerber, Calif.

PROGRESS IN ANTISEPTICS

For many years after Lister introduced the revolutionary idea of the chemical sterilization of wounds by the use of germicides or antiseptics, the problem was looked upon as a comparatively simple one. The investigator was content if he found some substance which had the power of destroying bacterial organisms. Comparatively little thought was given to the conditions under which the germicide was to be used, except that it was generally realized that it must be employed in a dilution low enough to avoid marked injury to the tissues to be treated, and in quantity small enough to avoid the danger of poisoning from absorption.

From year to year the profession has drifted along, "trying out" one antiseptic after another, without studying carefully the clinical problems which such antiseptic was intended to solve. Then came the Great War. The War has brought us many problems and is helping us to solve many, and one of these is the place of antiseptics in surgery and the conditions under which they may properly be used. Our indifferent methods of study during the last decade were rapidly leading us into surgical pessimism with regard to the value of any antiseptic under any condition. The War, by bringing us more experience, more necessity for careful study, is bringing us accurate knowledge—and a greater degree of optimism.

Probably no man has done more to throw light upon the whole problem of antiseptics than Dr. Henry D. Dakin, of the Herter Laboratory, New York, who early in the war was sent to France by the Rockefeller Institute to study the problem of sepsis from the chemical side, with Doctor Alexis Carrel, who took up the problem from the clinical side. In the little book recently published by Doctor Dakin, in association with Dr. Edward K. Dunham,*

we have a very complete and interesting summary of our present knowledge of this subject. The book is the fruit of the personal researches of Dakin and Dunham, alone and in association with various members of the British Medical Research Committee, with which Doctor Dakin has been associated. We can give here only a very brief outline of the field covered, but, we are glad of the opportunity to refer to the book itself, in which further information can be secured.

"The ideal antiseptic," says Doctor Dakin, "should effect a complete sterilization within its sphere of action, without causing any damage to animal cells." Needless to say, the "ideal" substance of this type has not yet been found, though much progress has been made in that direction. For instance, we know that an antiseptic which has little deleterious action upon leukocytes cannot be highly toxic; that the "ideal" antiseptic should not produce marked irritation; that it should aid in the rapid breaking down and removal of necrotic tissue; that it should favor the formation of healthy granulations; that it should not readily coagulate the protein of the tissues and the wound exudates; that, as applied, its action should be sufficiently prolonged to produce the results desired; that it should have as low a degree of toxicity as possible; and, finally, that it should possess highly antiseptic and germicidal powers.

On the whole, we gather from Dakin's careful study, the conditions are more nearly reached by a group of chlorine-carrying germicides than by any other substances, although it is freely admitted that there are many antiseptics—some old, some new—of very great value, some of these having found by experience to have special adaptability for certain specific conditions.

The oldest and perhaps the best known of antiseptics is phenol, which has had warm advocates ever since Lister adopted it. In a concentration of from 2½ to 5 percent it is still in common use, and, properly used, it gives good results, although it is now generally acknowledged to be inferior to many other antiseptics. It is slow in action and coagulates the proteins of the tissues and fluids. Its efficiency is reduced by the use of alcohol or glycerin as solvents, and when dissolved in vegetable

*A Handbook on Antiseptics. Macmillan & Co., New York. Price, \$1.25.

oils it is almost devoid of germicidal activity.

The cresols are more actively germicidal than phenol itself; in fact, a 1-percent solution of commercial cresol in water is said to be as active as 3 percent of phenol in germicidal strength.

Salicylic acid in various forms has been much used as an antiseptic, but, its disinfectant action is not great. It has a decided coagulating action upon the blood, it is but slowly soluble in water, and its germicidal activity is low.

Picric acid, another antiseptic discussed by Dakin, is also an active protein precipitant, and has the disadvantage of being decidedly toxic. In the presence of serum or wound exudates, it is of comparatively small value.

Of the metallic salts used as antiseptics, the best known is mercuric chloride. Like other metallic salts, it has the disadvantage of being readily precipitated by proteins, so that its high initial antiseptic potency is soon reduced. Perhaps as a consequence of this, its action is not nearly so rapid as is commonly thought to be the case. An interesting fact brought out by Dakin is, that, when used with ordinary "hard" drinking water, its activity is only one-fifth as great as when distilled water is used as a solvent. It is highly toxic.

The silver salts have special indications, but, the discoloration of the skin due to the action of light, and their caustic and coagulant action make them objectionable for many purposes.

Recently much attention has been given to the use of dyes as antiseptics. Perhaps the first to be introduced for this purpose was malachite green, brought to the attention of the medical profession by Fildes, Rajchman, and Cheate. Other similar dye-stuffs considerably used as antiseptics are brilliant green and flavine, or, as the last is often called, acriflavine, this being the most powerful of the group. This is warmly praised by Browning. "One of the most remarkable properties of acriflavine is, that its germicidal action is apparently enhanced by admixture with serum, though greatly diminished by pus. Relative to its bactericidal power, the dye is less detrimental to phagocytosis than most other antiseptics and it has but little injurious action on the tissues, but on the other hand its germicidal action is exerted decidedly

more slowly than that of some commoner antiseptics."

Iodine is one of the most widely used and most useful of antiseptics. It was introduced as a skin disinfectant by Stretton in 1909, and for this purpose is undoubtedly of great value. It has been found much too irritating for repeated application to open wounds, and it is said that severe neuritis has been observed as a result of its use. Its strong coagulating action upon protein is also an objectionable feature. "In general, it may be said that iodine will be found most useful when the conditions are such that rapid and complete sterilization may be effected by a single application, as, in skin disinfection or small surface wounds."

All things considered, the antiseptics which seem to be of greatest value are those of the chlorine group. They act quickly and powerfully; they break down necrotic tissue; they do not coagulate proteins; they favor healthy granulation; and they have a powerful deodorant and oxidizing action; they are relatively nontoxic, and of unquestioned potency and efficiency. The principal objection to the chlorine-carrying antiseptics is, their exceeding rapidity of action, requiring frequent application. This evanescent action is particularly marked in the case of sodium hypochlorite and similar salts of hypochlorous acid.

Chloramine-T (or chlorazene), the second member of this group described by Dakin, has an action more prolonged than hypochlorite, while Dichloramine-T, the third member of the group, when used in an oil solution, has an even more prolonged effect.

A very interesting comparison of the different antiseptics is given by Dakin and Dunham in their tables. As already pointed out, the method of standardizing germicidal activity against phenol in aqueous solution gives insufficient information to be of much practical value. When they are applied to the body we are not dealing with aqueous solutions only. There are other factors to be considered; for instance, the amount of wound secretion; the presence of pus in any considerable quantity; the concentration of the antiseptic; the method of administration, particularly as to whether the action is short or prolonged; the degree of contact between the germi-

cide and the germ; and the temperature of application.

"The only satisfactory way to follow the speed of disinfection," says Dakin, "is, to determine the progressive change in the number of bacteria in a suitable mixture after varying lengths of time." The mixture employed for the testing of the germicidal activity was one consisting of equal parts of horse-blood serum and a muscle-extract obtained by soaking fresh veal with an equal weight of saline and then straining through cloth but not filtering. To this mixture two drops of a staphylococcus aureus emulsion was added, and the bacteria counted to show the number of organisms in one drop, i. e., 1-40 mil. (Cc.). Various germicides were added to this mixture, and bacterial counts were made from time to time, varying from a few minutes up to twenty-four hours.

Some very interesting results were obtained by these experiments. For instance, it was shown that mercuric chloride acts very slowly. The mixture to which a 1:1000 solution of mercuric chloride was added was not sterilized for twenty-four hours. A similar mixture was not completely sterilized by silver nitrate in twenty-four hours, nor by phenol in twenty-four hours. In 0.5 percent of sodium hypochlorite, it was sterilized in five minutes; by 2 percent of Chlorazene in five minutes with Dichloramine-T, 2 percent sterilization was complete in half a minute.

An interesting comparison of chloramine-T (chlorazene) and hypochlorite is as follows: "A comparison of Experiments I and IX shows that a concentration of 0.25 percent of chloramine-T (chlorazene) in the mixture was as effective as 0.33 percent sodium hypochlorite, although the active chlorine in the latter was about five times as much as that in the chloramine-T. The reason for this difference is to be sought largely in the slower rate of reaction between chloramine-T and hemoglobin and other proteins, compared with the hypochlorite solutions."

The study of the antiseptic dyes was of particular interest. It was shown that in no case was sterility effected by the use of these substances, and after some hours the organisms grew unchecked. It was also noted that similar mixtures of blood-serum and muscle-extract, mixed with these dyes so that the final concentration was 0.1

percent, on exposure to air readily underwent putrefaction; showing that the germicidal action of the dyes is not marked.

From the preceding it will be seen that the chlorine-carrying antiseptics, and particularly chlorazene and dichloramine-T, are in almost every respect far superior to other antiseptics in general use. The chlorazene, being water-soluble, is indicated in all conditions where moist applications are indicated, and particularly where the wound can be kept constantly wet with the substance, or where applications can be made frequently. The dichloramine-T, being given up slowly from the oil which is used as a solvent, is particularly suitable "for cases requiring prolonged antiseptic treatment and for first-aid dressings in recent wounds which do not require irrigation." It is also useful for nasal antiseptics in the treatment of nasopharyngeal disease and for clearing up carriers. It has the great advantage over other chlorine antiseptics that it may be used in high concentration. It ordinarily need not be renewed more than once in twenty-four hours.

In using chlorazene, Dakin says that in practice it is advisable to keep a 2-percent solution in stock and to dilute this, if necessary, either with water, or, in case of considerable dilution, with normal saline solution, and, when an approximately isotonic medium is desired, normal saline solution should be used for preparing the desired dilution.

Ordinarily chlorazene is used in a 1-percent solution. As this is twice the strength in which hypochlorite can be used without causing irritation, it will be found to answer the purpose in almost any case of infection. In emergency, however, a 2-percent solution may be employed. On the other hand, even in very high dilution, chlorazene is an effective antiseptic. "In the eye, for example," says Dakin, "a solution of one part of chloramine-T in 1000 parts of normal saline solution will exert a satisfactory germicidal action, while 1:500 may prove rather irritating to the inflamed conjunctiva. Here, because of the constant irrigation by tears, there is chance for only a moderate accumulation of septic products likely to reduce the strength of the application."

"In chronic urethral infections, 1:500 can be used for the initial injections and the concentrations subsequently increased.

Similar considerations apply to the irrigation of the pleural cavity in empyema."

Chlorazene is also extensively used in a paste, made from sodium stearate and containing 1 percent of the chemical. This paste was introduced by Daufresne and has been extensively employed by Carrel and Hartmann. It has been placed on the market under the name of Chlorazene Surgical Cream.

We have touched only the high spots in the Dakin-Dunham Handbook on Antiseptics. It contains a rich fund of material, which should be in the hands of every physician.

ALFRED S. BURDICK.

Chicago, Ill.

AN APOLOGY TO DOCTOR LYDSTON

We are very sorry to say that in the article by Drs. Lydston and Latimer on "Tumors of the Urinary Bladder," which appeared in the November issue (page 802), the first picture was improperly placed, while legends were attached to both which, unfortunately, were incorrect. The legend of Fig. 1 reads, "After removal of the tumor," while, as the picture shows, the tumor is still in situ. The legend of Fig. 2 reads, "After successful operation for carcinoma," while the carcinoma is still plainly in sight in the picture.

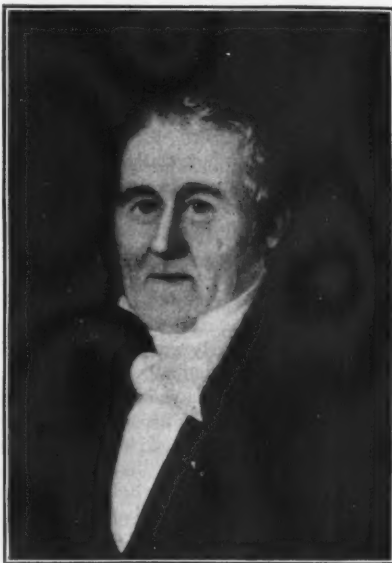
The mistakes are very regrettable, and we wish to apologize to Doctor Lydston for their occurrence.

THE THURBER MEDICAL ASSOCIATION: A RESPONSE TO A TOAST

This is our Anniversary Day; and to me is given the chance to make our annual boast, that ours is the oldest—and the best—independent local medical society in America. We have put forth this, our modest claim, for some twenty years and have yet to hear it disputed; it has been published to the world in *The Journal of the American Medical Association*, and no one has risen up to contradict it; no other claimant has ever come forward to question our right to this title. Therefore, we are justified in believing that we are IT.

No doubt, hundreds of other similar societies have been born; but, long before attaining to our age, they either have given up the ghost or else taken refuge under the

shadow of some larger central organization, and, so, become leaners, instead of boosters. We know of no other small country society, made up of country doctors, carried on by its members for their own benefit and that of the community in which they reside, which has succeeded in living for sixty-four eventful years, keeping up its interest and holding regular



Dr. Daniel Thurber.

meetings during all that time, and still looking forward in the confident expectation of doing yet better work in the future.

And now I purpose to tell you how it has come about that the Thurber Medical Association has been able to outlive the diseases of childhood, to withstand the maladies of middle life, and, after all this, to be standing forth, in a green and vigorous old age, the pioneer and patriarch of its kind.

In the first place, our good Society was founded because the physicians of this section felt the need of the stimulus of professional intercourse, but found that neither Boston, which was a long way off, nor Worcester, which was very inconvenient of access for this section, could satisfy that need. And, in truth, it is in part because of the remoteness of our location, far enough from the larger centers of population to avoid being swallowed up by them,

that it has been able to continue its separate existence up to this year of grace nineteen hundred seventeen.

In the second place, we have been fortunate in our name, which carries with it a broadness and an individuality that does not attach to the name of a place. Daniel Thurber was a noted man in this vicinity, and, though he had been dead seventeen years when our Society was born, we adopted him as our godfather; and we have kept his memory green during all these years, made his name a household word in our homes, and have adopted his handsome face as our emblem.

Also, we have been fortunate in our membership. Ours is a fairly homogeneous society, its members all being general practitioners, and all interested in the same lines of work. We have never had among us any brilliantly dazzling electric lights to dim the modest glow of our tallow dips. We never had any acknowledged leaders to look up to, but have all been simply good "average" men, nearly enough on an even level to be able to understand each other. Our numbers have always been so few that each one has had a chance to do his part, sharing both in work and in honors. If any man attends our meetings and shows an interest in what we are doing, we soon get acquainted with him; we size him up—and he sizes us up.

Milford is only a small town among small towns, does not furnish a majority of our membership, and, as may be seen by the day's program, does not annex most of the offices.

The highest rank in our membership is that of Wheel-Horse, and of these we fortunately always have been blessed with more than one. The "wheel-horse" is a man who not only is willing to work himself, but who knows how to get other folks at work. What success we have had has been largely due to our "wheel-horses." One of these has been our Secretary for the last fifteen years; and, if you will look at our record book, you will agree that he has been as good a secretary as any society needs to have. Today, in his extreme illness, our sympathy goes out to him, and we miss his genial presence and his unstinted enthusiasm. Not one of our members has been more interested in the preparations for this anniversary than had our secretary, Doctor Gallison. What work he has not

been able to do himself, his wife has done for him—and done it well, you will agree.

We have tried many ways to make our meetings interesting and profitable. The early way was, to appoint the members in alphabetical order, to read papers and discuss medical and surgical topics. The records show that this plan worked well sixty years ago; however, it won't work now any more. Instead, it takes all the ingenuity of our program committee (on which we put our best men) to study up some new plan every year. We have had such men as Trowbridge and Gage and Fallon, of Worcester, and Richardson and Garland and Cabot, of Boston, and Crothers, of Hartford, and Lewis, of New York, besides many others from various places, to bring up messages from the firing line. We have had symposiums on such burning topics as pneumonia and headaches and rheumatism; practical papers on all sorts of medical and surgical topics, from our own members and from good men from the outside. We have considered the merits of the various medical "isms" and methods of treatment, regular, homeopathic, eclectic, electric, alkaloidal, physical, and biological. We have catered to the educators by meetings on school inspection, have discussed nurses and nursing, for the benefit of the pupil nurses in our hospital. We have called in the public, to consider with us "how to live a hundred years." We have had an official organ at two different times, while many of the papers read here have been published far and wide over the country. And, also, we, at one time, were urged by a former president of the Massachusetts Medical Society to give up our charter and become a district society. This was distinctly a high honor, and was carefully considered; however, the idea was unanimously rejected.

I doubt whether any one feature has contributed more to the longevity of our Society than our annual meetings. For more than sixty years we have met together each year, on the Thursday on or before the full of the moon in October—a day for which we have an almost superstitious reverence—and always we guarantee a pleasant afternoon, provide a good dinner, furnish the best entertainment in our power, and enjoy ourselves generally, together with our wives and friends and invited guests, getting home in time for our evening office hours. I do not know how such a plan would work

in a metropolis; our folks, though, seem to enjoy it.

So, here you have it all in a nutshell. A society of country doctors, few in number, poor in pocket, and not making claim to more brains than their neighbors are endowed with. And yet—and yet—we have stood the strain of sixty-four eventful years, have done good work, have paid our bills in full, have today appropriated \$500 of our invested funds with which to buy a Liberty Bond, and are still in good health, with confident anticipations for the future. *Can you beat it?*

Here's to Doctor Thurber, of Mendon!
Long live the Thurber Medical Association!

J. M. FRENCH.

Milford, Mass.

ANOTHER COLLEGE MERGER

Bennet Medical College and the Chicago College of Medicine and Surgery are now combined, to form the medical department of Loyola University of Chicago. The purchase of the buildings and equipment of the Chicago College was made recently by Loyola University officials.

Dr. Lawrence Ryan is dean of the new faculty of the school; Dr. Alfred de Roulet is junior dean; Dr. G. E. Wyneken is secretary; Rev. H. S. Spalding, S. J., is regent.

The college is located on Lincoln Street, opposite Cook County Hospital, in the medical center of the West. The institution comprises five buildings.

Work will be carried on at the college on the highest plane possible, to meet requirements of all states.

Clinical work at the school is taken care of by men who are prominent in the medical profession. One year of college work is required from medical students before entering the school.

SODIUM CACODYLATE IN EXOPHTHALMIC GOITER

In view of the innumerable remedies suggested for the treatment of exophthalmic goiter, it is surprising that no one seems to have thought of that now familiar remedy, sodium cacodylate. So, it may be of some interest to learn that I have used it thus and found it far better than any other remedy I have tried; it being, at present, virtually the only one I use in the treatment of

this disease. Physicians who will try this remedy will, I am sure, like myself, not easily be willing to change to any other.

I inject the sodium cacodylate intramuscularly. At first I give a small dose—0.12 Gram, or approximately $1\frac{1}{2}$ grains—once every day, and continue them for twenty-five days. Then I discontinue the sodium cacodylate for several days, and in its place prescribe some iron preparation. Then I resume the cacodylate injections, however, in slightly increased dosage.

In severe cases, I prescribe, at the beginning of treatment, small doses of quinine hydrochloride four times a day, by mouth. In cases of moderate severity, sodium cacodylate alone is sufficient to effect a cure.

RAFFAELE MORETTI.

Los Banos, Calif.

[This is, indeed, an exceedingly interesting communication. Exophthalmic goiter is not easy to cure. The best single remedy we thus far have found is quinine hydrobromide, given in 4-grain doses four times a day, according to the method devised by Forchheimer. The combination of the quinine-treatment with sodium cacodylate, as adopted by Moretti, certainly warrants careful trial, especially in the more severe cases. Have other readers of CLINICAL MEDICINE had experience with this method of treatment? We want to hear from as many as possible.]

By the way, why can we not have a symposium on exophthalmic goiter? We hope that as many of our readers as possible will tell us how they manage this disease—whether they are getting results from medicinal treatment, whether their cases treated surgically are turning out favorably, and, in fact, telling us any "novelties" as to their method of procedure.

May we also point out once more the importance of intestinal cleanliness in this condition? Certainly, intestinal antiseptics are indicated in practically all cases.—Ed.]

GALACTENZYME TABLETS AFTER LAPAROTOMY

In May, 1916, I began using galactenzyne tablets, to relieve the excessive gas distention following an operation for cesarean section. Having had such good success with them in typhoid fever, I tried them here, and with equally good results.

Since that time, I have used them as a part of the after-treatment in every laparotomy, such cases as general peritonitis resulting from ruptured abscess in appendicitis, acute salpingitis with leak into the peritoneal cavity, and similar conditions.

As soon as the patient recovers from the anesthesia and stops vomiting enough to begin taking hot water, I give two tablets, dissolved, every three hours for thirty-six to forty-eight hours, then about three or four times daily. Since adopting this treatment, I have not been obliged to prescribe anything for the relief of gas-pains and, in most cases, not an enema is given during the whole convalescence.

After the trial I have given these tablets, I feel sure that anyone can secure equally as good results.

CHAS. A. WRIGHT.

Delavan, Wis.

HOW TO CURE GOITER

With regard to the article, in the November number of *CLINICAL MEDICINE*, on how to cure goiter, I would respectfully refer all interested to Abrams' work on "Spondylotherapy." For some years, I have been following his suggestions with singularly satisfactory results. In 1911, when the Michigan State Medical Society was in session here and Dr. Mayo was highly praised as the proper man to remove goiter by surgical means, a lady of middle life appealed to me, saying that her physician—a very expert counsel—advised surgical removal of the gland, which was so large that she could not wear her ordinary clothing about the neck.

I was consulted, as she dreaded an operation and would not consent to it. By means of concussion of the seventh cervical spine, made with a tackhammer for plexor and a strip of linoleum as a pleximeter, these continued for ten minutes each day for ten months, I was able to reduce the goiter to such an extent that ever since then she has been able to wear her ordinary clothing with comfort. The goiter is not entirely gone. Neither do the surgeons admit that she has recovered.

C. S. COPE.

Detroit, Mich.

[While the makeshift employment of tackhammer and strip of linoleum (or,

rubber) in place of plexor and pleximeter has the sanction of Abrams' ("Spondylotherapy," 1910, p. 8), it may be assumed that every physician possesses the regular instruments for the purpose. Doctor Cope's experience is highly interesting; as is, indeed, the whole theory and practice of Abrams' new methods.—Ed.]

ENLARGED OR SWOLLEN NECKS FROM GOITERS

"I love women with large saucer-shaped necks" said a giant of a man to me not long ago.

"What do you mean?" I asked, with a smile.

"Well, you see," said this unusually intelligent and observant gentleman, "I have noticed ever since I read the first chapter and nineteenth part of Canto II of Pope's 'Rape of the Lock,' that there is more real feeling and passion, more womanliness and sweetness in girls and women who have a suspicion of a goiter."

What this man said is true. The emotions that accompany a slightly enlarged thyroid gland, a flat-shield-shaped goiter, are the warm, clinging, feminine characteristics that we love. It required, as usual, a nonmedical man to make this medical discovery. Doctors are generally too near-sighted to record such truths.

Here are the lines of the "Rape of the Lock," which in a farfetched way at only one part make reference to the neck and hair:

This nymph, to the destruction of manhood,
Nourished two locks, which gracefully hung
behind

In equal curls and well conspired to deck,
With shining ringlets, the smooth ivory
neck.

Love in these labyrinths his slaves detains,
And mighty hearts are held in slender chains.
With hairy springes we the birds betray,
Slight lines of hair surprise the finney prey,
Fairy tresses man's imperial race unsnare,
And beauty draws us with a single hair.

The thyroid gland, in most healthy persons, is not outwardly perceptible; swollen, enlarged, constantly irritated by sexual or glandular excitement—a characteristic of some races or families—it may expand enough to form a saucer-like placque, visible and palpable on the throat, and then is called a slight goiter.

Thyroiditis is inflammation of the thyroid gland. If the ophthalmic region, the

eyes, exhibit certain characteristic signs, such as full, big or projecting eyeballs, the term exophthalmic accompanies the goiter. Exophthalmic goiter merely means that besides the swollen neck, or bulge forward, there are protruding eyes, rapid pulse, occasional palpitation of the heart, sighing and trembles of the muscles.

The substances elaborated by the thyroid gland can be found to produce those very activities. Fresh thyroid glands (or their extract) are given, when it seems indicated, to stupid, dullwitted, sluggish cretins or dry-skinned, thick-fleshed individuals.

Dr. A. Siebert is convinced that there is a great increase in the number of exophthalmic goiters. Men are in the minority, probably because there are nowadays so few eunuchs among them and such that are favored by a more or less stabilized vegetative nerve-system, in contrast to the girls working in factories and dry-goods houses, and in offices and schools, bending forward over their work. That is a cause for the many exophthalmic goiters seen, that is the primary condition we seldom get to see and seldom get the chance to take care of in time to prevent its progress.

In the treatment of an exophthalmos, the problem is a twofold one. Doctors are called upon to step in after the symptoms of palpitation, nervousness, muscular tremors, general or special muscular weakness, local weakness of the knees or of the voice, mental symptoms, depression, changeable disposition, flushes; affections of the ears, the eyes, the organs of smell; general or local pains in the finger-tips, toes, heels, and the course along big nerve-trunks; headache, vertigo, dyspepsia, diarrhea, insomnia, loss of hair, premature gray hair, pigmentation of the skin, itching, sweating, low blood pressure, loss of weight despite good appetite, all these, have their manifestations, singly or combined.

Looking over the symptoms enumerated, to which others might be added, we can not help to recognize as predominant one particular factor, namely, the lack of vitality, as expressed in pronounced emaciation.

Tonics and probably other medication, according to the condition, are required. The real cause of the exophthalmos, has to be reached by other means, however.

Every form of treatment, medical or surgical, in this disease is directed toward

the reduction in the size of the thyroid gland, and it seems to be reasonable to assume that by diminishing the activity of this transfer-station between cause and effect the results generally desired can be obtained. It is illogical and unscientific to treat an effect or even to concentrate all one's attention upon an organ that nature has created for its own relief or to remove this organ by operation, while neglecting the cause, which is, the vegetative nerve-supply of the glands on the other side of the effects that we get to see.

Every minute, the quantity of blood passing through the gland is equivalent to six times its weight, and it is five and one-half times as vascular as the kidney. The thyroid glands deserve attention at least five and one-half times more than do the kidneys; but, so far have failed to obtain a record attention. One does not know what to admire more, the enormous vascular capacity of the thyroid gland or the activity which makes such a vascularity possible.

LEONARD K. HIRSHBERG.

Baltimore, Md.

A SIMPLE SOOTHING APPLICATION FOR SKIN ERUPTIONS

The following is an effective, soothing and healing application in skin eruptions, especially psoriasis, acute dermatitis and intractable eczema. It is most effective when the eruption is scaly—it softens the hardened skin and gives comfort. It is prepared as follows:

To 1 quart of slippery-elm water add 3 drams of Goulard's Extract (liquor of lead Subacetate) and apply by keeping a compress thoroughly moist with the solution. The slippery-elm water is prepared by adding to 1 quart of boiling hot water one-half ounce of either ground or whole slippery-elm bark, and let it stand twelve hours; then strain and keep in sealed jars till ready for use.

It requires experience to know when to use lotions, salves or pastes. When properly selected, a lotion will do vastly more good than any ointment. Lotions apply only to certain classes of skin eruptions—the more acute and inflammatory the pathology, the more certainly should lotions be used. Salves are useful in conditions of opposite character; they are of little value on a surface that is constantly oozing.

Ointments are to be employed in the chronic conditions. Pastes are similar to salves and cerates, only, they are firmer and are intended to remain upon the surface as a protection, while being soothing.

H. F. BIGGAR.

Cleveland, O.

[This is a remarkable little article, because of the valuable information it contains, no less than on account of the brief, concise form in which this information is given. There is the remedy, there are the indications, and the differential uses of salves or pastes, respectively lotions. Not a word could be spared. This is the sort of articles that we want—practical, concise, meaty, and to the point. Let us have more of them, please.—Ed.]

AMENDMENT PROPOSED TO THE HARRISON ANTINARCOTIC LAW

This amendment to become effective from its passage by Congress and being signed by the President. It shall be the duty of each physician registered under this law to make a written report, on the first day of each month, to the collector of internal revenue of his district, showing the amount of narcotics, opium, morphine, cocaine, heroin and novocain that he has bought during the preceding month, giving the name of the firm or druggist, location, town, and so forth; also how much he has dispensed personally, giving name of patient, and so forth; also the amount on hand at this report; this not to include prescriptions written and filled by a druggist.

Also, the druggist, on the first day of each month, to make a written report of all narcotics bought, opium, morphine, cocaine, heroin, novocain, and so forth, giving the name of the firm furnishing said narcotics, and also showing in this report the number of prescriptions filled, names and their location of physicians writing them; also showing the amount of narcotics on hand at the close of the month.

It would take very little time for such a report to be made out, and, I believe, it would be of great benefit and protection to all concerned. Then a physician or druggist would not be subject to suspicion. Any physician or druggist making a false entry or trying to hide the amount bought or on hand, upon conviction, should be fined or

imprisoned, as the court might decide.

I certainly think this is a good proposition. I believe it will prove a great protection to physicians, and put the Government in more complete control of the dope traffic.

H. SAMPSON.

Gerber, Calif.

[We cannot enthuse very much over this suggestion which, to us, appears to pile on the onus of unproductive labor unduly. What does the family think about it?—Ed.]

HIGH COST OF LIVING

There are too many actors to bore us
And stars who are hardly a shine;
There are too many lording it o'er us
There are too many catered and waited,
Subsisting on lobsters and wine.
Who call for the fizzy-and-dry,
Too few who are sowing and hilling and hoe-
ing,
So living—well, living is high.

There are too many thrummers and strum-
mers
Annoying the keys and the strings;
There are too many drummers and loafers
Who are riding in automo-things.
There are too many schemers and dreamers
And only a few who produce,
Too many investing in golden-egg nesting
And few who are growing the goose.

There are too many preachers and teachers
Who work the south half of their faces;
There are too many tourists and jurists,
Whose suits are concealed in their cases.
There are too many lawyers and jawyers
Who demand, but who cannot supply,
And they serve a subpoena upon a Martini
And wonder that living is high.

Too many are looking for cooking,
Too few are encouraging spuds;
Too many find sinning is simpler than spin-
ning
To dress in delectable duds.
There is too much of diction in fiction
And not enough actual toil;
There are too many diggers at fictitious
figures
And not enough diggers of soil.

There are too many rimers and chimers
(Like me) doing versified stunts;
There are too many gapers (like you) of the
papers
Who read and forget both at once.
There are too few who skin hard the vine-
yard,
Too many imbibing its juice,
And the while we inquire: "Why does living
grow higher?"
The bulk of us fail to produce.

—Edmund Vance Cooke.

In the World War

THE MAKING OF AN ARMY MEDICAL OFFICER

On leaving the M. O. R. C. at Ft. Riley, Texas, with orders to report for duty to the commanding officer at Kelly Field, South San Antonio, we felt pretty much the same as a physician does with his first case after leaving medical college. The instructors to whom we used to turn for information and advice no longer are available. We are out in the world now, as medical officers, who have had a course of intensified training and are presumed to know enough to make good on any assignment.

We appreciated the fact that we did not as yet know everything about military affairs and still carried our books in our lockers to refer to, still looking for crumbs of information to add to our little hoard accumulated at training camp.

On reporting at headquarters with a copy of the orders, which were responsible for our being there, we entered our names in the book there, turned over our baggage checks to the assistant adjutant, and he had our belongings conveyed to our respective rooms.

Each medic was given a room 10x10x13 feet, in a new wooden barracks. The only furniture consisted of several nails driven in the wall, on which to hang our clothes. Each officer carries his own bedding roll—blankets, cot, chair and locker; and this furnishes his room.

We had electric light, and a wood-burning stove for the cooler evenings. The latrines were outside, also a small bathhouse with the usual showers. Uncle Sam is keen on his men having their showers.

These quarters were, of course, only intended for temporary occupancy, for, as soon as a medical officer was assigned to an aero squadron, it meant that he should be there only long enough for this squadron to be filled up and equipped, whereupon it would leave.

After getting acquainted with our room, we went to the camp infirmary and reported

to "The Surgeon" and made out our personal reports, to send one to the Surgeon-General and one to the Adjutant General at Washington.

Our work while here was not very arduous. We reported daily at 8 a. m. to the infirmary. "Sick call" is sounded daily at 7:30 a. m. in each company, and those of the enlisted men who feel sick come to the infirmary. Those of the men who had not as yet had their typhoid and paratyphoid inoculations and vaccinations completed were given them here. Records of each man's inoculations are kept in his service record and follow him with each change of station, so that there is little danger of his not getting them complete, especially if one is booked for overseas service. He is more likely, if the record happens to get lost, to get an additional "shot." The men line up outside the tent in long rows; inside, a medical department non-commissioned officer keeps the records, and, as each man steps in to receive his injection, the date is entered opposite his name. He then passes to where two or more medical officers are, each armed with a hypodermic syringe, and between them a table on which repose extra needles, antiseptics, and vaccines.

The men are handled very quickly. After receiving their dose, they pass out to the rear of the tent, their vaccination scar is examined by another medical officer, and, if deemed insufficient, they are revaccinated. We inoculated between 500 and 600 men a day, and vaccinated about as many. Aside from a feeling of lassitude and a slight fever in some of the men, which develops eight or ten hours after the inoculations and lasts only over night, no disagreeable reaction resulted from these inoculations. In this camp we used a vaccine that contained both the typhoid and the paratyphoid bacilli, being known as the "triple typhoid." A course of three inoculations immunizes against both diseases. At our training camp we received three inoculations for each, six in all.

All new recruits entering the camp are inspected for contagion, including venereal.



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Rockefeller Institute War Demonstration Hospital where Dr. Alexis Carrel is instructing American Surgeons

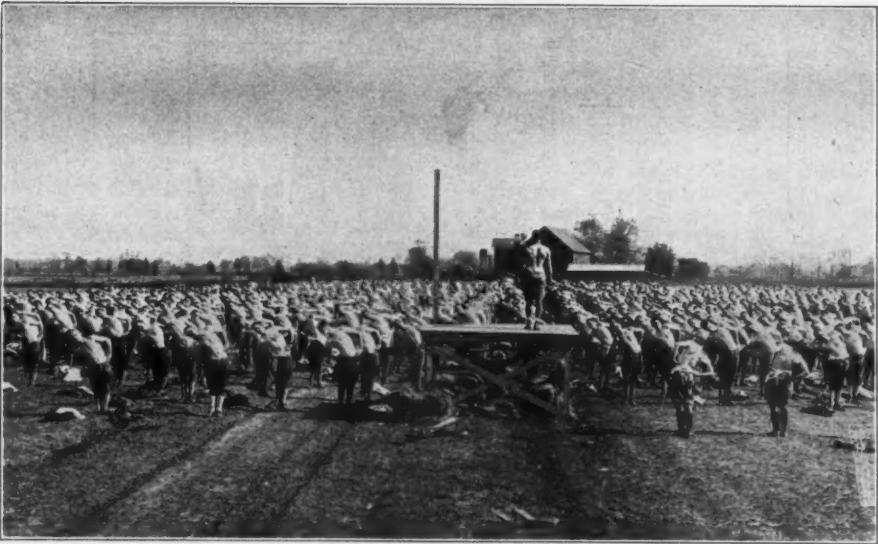
skin, and throat. The men render absolute obedience, so that it takes very little time to look over a hundred subjects. The make-up of the enlisted men, both from the physical and the mental standpoint, is very good, and the medical officer finds only an occasional case of measles, pneumonia, tonsillitis or gonorrhea among them. These patients are promptly sent to the base hospital, and measures are taken to prevent spreading. The medical officer gets practical training here in rapid vaccination and inoculation and in making out reports. This latter will hold him in good stead later, when he is still further alone—that is, when he is the only medical man in a detachment.

We eat at officers' mess, which costs \$1.25 a day. Considering the advancing cost of food, we feel this to be reasonable enough, for, they set a good table and we still are able to do it justice. Right here, I should like to mention that in the three months I have been in the service I have gained 14 pounds. Being slender to begin with, this gain was very welcome. The slender man begins to gain as soon as he enters the service. This gain shows even

in the training camps, owing, I suppose, to the regular hours of eating and sleeping and the relaxation from a great deal of worry of civil practice.

One of the pleasant points of the training camp was the association of so many medical men together from all points of the country. Evenings, we held impromptu medical councils, going over cases that we had had, getting one another's opinions, methods, and so forth, for minor and major surgery, internal medicine, different anesthetics, and other phases. But, with our lessons to study, the time for such discussions necessarily was limited; still, our duties here are very light; we have evenings entirely to ourselves, and it is really an education to sit in for an evening with six or eight doctors from different cities, different hospitals, ideas entirely different from one's own, and, ably aided by a fragrant havana or a veteran Jimmy pipe, freely discuss, ask questions, and praise or censure the methods presently used.

I do not think very many physicians expect to make money in the army; an even break is the best most of us can do on our



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Men of National Army Are Being Put in Fine Trim.

"princely" salary. Our practices will be "shot to pieces" when we return, and we shall have to begin to build all over again; nevertheless, I trust that this will be more than compensated for when we all return to civil life, if the M. O. but learns the value of this teamwork that is the vital part of the army, and carries it out. "The Medical Utopia" is not an impossibility, and I sincerely hope a great stride toward it will be taken by us, who are learning system, teamwork, discipline, subservience of individual prestige, for the good of the whole, where one man can be looked to for responsibility, where each is a unit depending upon, and in turn being depended upon by the rest of the vast machine. "The Medical Utopia," where each physician can do his best for his people and at the same time for himself, by getting his regular hours for rest, recreation, and further study, without the gaunt specter of want or necessity being ever before him! It is a beautiful dream and we shall not see it come true. And yet, why should it not be feasible—and why not investigate?

Ambulance duty is one of our duties here, though not very arduous. Shortly after breakfast, motor ambulances manned by one medical officer and two medical department men proceed to either end of the flying fields, ready to render first aid, should

any mishap happen to any of the flyers. Fortunately, and also thankfully, accidents are very rare.

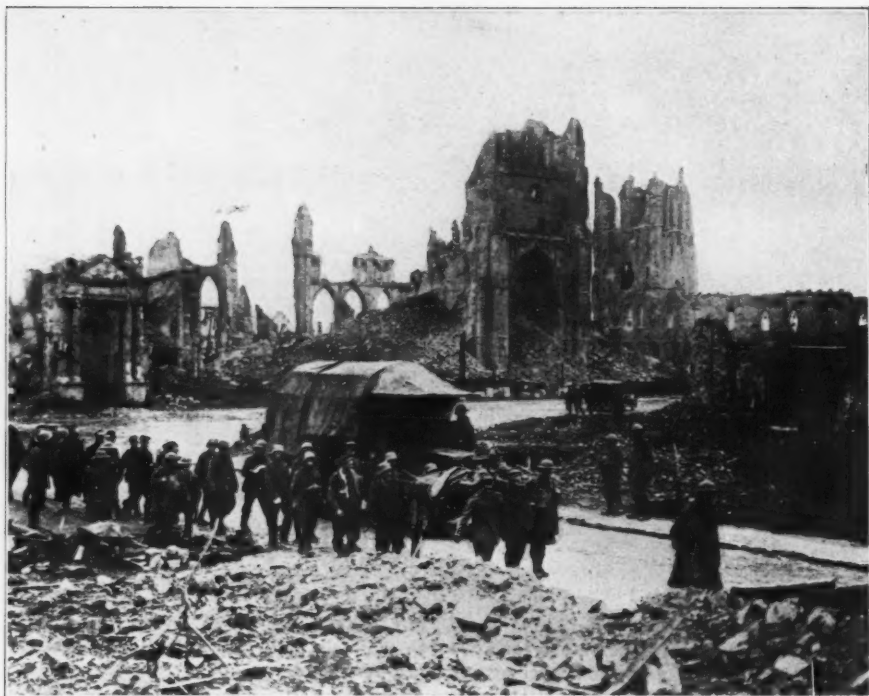
Officer of the day, another duty where, paradoxically, the O. D. does most of the duty at night. That is to say, when any man is ill enough any time of the evening or night to require a diagnosis, it is the duty of the officer of the day to care for him. A medical department enlisted man calls for him at his quarters with a motorcycle and side car, and he is whisked away to the patient. Being called for a few times a night makes us feel as if we were at home again. This duty is only for twenty-four hours at a time, each medic having his turn.

I have put in four weeks here awaiting overseas orders. More time than I expected; but, the vacation was welcome, for, it gave us time to meet some of the physicians from Ft. Benjamin Harrison and Ft. Oglethorpe training camps and learn of their experiences.

ROBT. C. MURPHY,
1st Lieut., M. R. C.

San Antonio, Tex.

[We understand that Doctor Murphy expects to leave for active service with the aviation section to which he is attached. We wish him all that is good, and hope that he will write to us from over there; also,



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German Prisoners Taken in Battle of Menin Road, Marched through Ypres.

that in due time he will return safe and sound.—Ed.]

"FITTING THE UNFIT"

Under the title given above, Dr. Edwin F. Bowers contributes to *Everybody's* for December a very thoughtful paper upon the sifting out of the unfit by exemption boards from men called for military service by the Nation. The experience of a number of the medical examiners of these boards is cited, among them that of the editor of *CLINICAL MEDICINE*.

The outstanding fact cited by Doctor Bowers is, that "the total number of rejections for physical unfitness in these country-wide examinations will average about one in every four examined." This relatively large number of discharges for physical disability is the more striking, when it is kept in mind that "the bars were down" as compared with physical tests previously required to enter Army service. The requirements as to weight, vision,

hearing, and the like, were lowered from time to time during the draft. In the Army and Navy, before the war, these one-in-four percentages were practically reversed. In 1916, in the Navy, 70 percent were rejected; at Annapolis, about the same percentage; and in the Army about 68 percent were found unfit, in one month.

There was great variation in the results reported by different boards. We learn from Doctor Bowers' article that one Brooklyn exemption board early in the draft examined 600 men without being able to secure its quota of 191, and was forced to call 1200 additional men. The worst case reported was in Brooklyn, where of 104 men examined only one was retained. On the East Side of New York the rejections of one board were said to be about 40 percent. In this district there were 650 rejections out of a total of 1500 examinations. The physical condition of the men in this district was said to be peculiarly bad because of deficient nutrition, resulting largely from poverty, uncleanness, over-

crowding, poor ventilation, long hours of work, excessive use of tobacco and alcohol, and vice.

Among the physical defects which were very frequent among young men and to which Doctor Bowers calls particular attention, were diseases of the heart, hernia, flat foot, defective vision, poor teeth, tonsillar and other glandular enlargement. In a few districts, as the First Ward in Chicago, and in certain districts in Pittsburgh, there were many rejections due to occupational causes, for instance, maimed arms, burned limbs and missing fingers. One of the worst records was that of the Third Ward in Chicago, in which upward of 10 percent of the applicants were found to be suffering from active venereal infection, while hundreds more were afflicted with chronic forms of these diseases, and alcoholism was common.

Turning now to the future, we find special interest in the physical-examination requirements laid down for the draft in "Selective Service Regulations," just published by the Government and taking effect upon December 15, 1917. We find that in several respects the requirements have been lowered. Not only have the minimum weights been reduced, but the examining physician is permitted to accept a candidate who is below the minimum weight "provided the underweight is due to temporary causes and can, in the opinion of the medical examiner, be reasonably explained."

The standard for vision has also been reduced. The regulations in use during the first draft required a 20/40 vision for one eye and 20/100 for the other. The new regulations specify that "Men may be accepted whose vision is 20/100 or better in each eye, correctable by proper lenses to 20/40 or better in at least one eye, provided no organic disease exists in either eye."

As to hearing, the new regulations require that with both ears open the hearing should not be below 10/20.

Curvature of the spine is now cause for rejection only when it is sufficient to interfere with function or to constitute a marked deformity when the drafted man is in uniform.

We also learn that hypertrophied tonsils are not disqualifying, but, if the hypertrophy is sufficiently marked to interfere with respiration or phonation, the registrant

should be advised to have the large tonsils removed immediately, in the expectation of receipt of orders to report for duty.

The ruling on heart murmurs is of particular interest. Cause for disqualification is "definite organic valvular disease as indicated by secondary signs or symptoms in addition to murmurs." But it is also stated that "ordinarily no murmur should be declared organic unless secondary physical signs, such as cardiac enlargement, edema, cyanosis, etc., can be demonstrated".

Venereal diseases in themselves are no longer cause for rejection. "Syphilis is a cause for rejection only when permanently incapacitating. Syphilis in the primary and secondary stages, that is, during the infectious period, chancroid, and gonorrhea (acute and chronic) are not disqualifying, but, individuals so affected should be advised immediately to secure appropriate medical treatment pending receipt of orders to report for duty."

As to the feet, large and painful bunions, hammertoes, if well marked and interfering with the wearing of a shoe, and overriding or marked displacement or deformity of any of the toes are cause for rejection; but, it is interesting to note the definition of the disqualifying flat-foot. "In the flat-foot which renders a man unfit for service, the arch is so far gone that the entire border rests upon the ground, with the inner ankle lowered and very prominent and the foot apparently pushed outward."

The drafted man theoretically "must have at least eight serviceable natural *masticating* teeth, either bicuspid or molars, four above and four below opposing, and six serviceable natural *incisors or canines*, three above and three below opposing," but, the following qualifying statements are made: "There must be one molar above and one below on one side which occlude; the remaining six opposing natural teeth may be either bicuspid or molars." Furthermore, teeth may be restored by crown or fixed bridge work, and these, when well placed and serviceable, are to be considered as natural teeth within the meaning of the above paragraph. Also, a well fitting plate or other denture is allowed to take the place of missing teeth, "providing the serviceable natural teeth on one side of the mouth are sufficient to meet one-

half the masticating (bicuspid or molar) requirements fixed above as the minimum."

While the number of candidates to be examined under the new regulations will be much smaller than before, the burden placed upon the examining physician is considerably greater. Any member of an



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Husky Scots Carry Wounded Boche Prisoner at Battle of Menin Road.

exemption board who has had an opportunity to study the new "Selective Service Regulations" will agree fully with the writer. We shall be glad to hear of their experiences.

ALFRED S. BURDICK.

Chicago, Ill.

UNIFORMS FOR EXEMPTION BOARDS

Dr. H. J. Smejkal, a member of one of the suburban (Chicago) exemption boards, has recently made the interesting suggestion that members of selective service boards should be directed to wear an appropriate uniform. This is more important than it may seem at first thought. In many localities, especially in the congested portions of our large cities, people respect the man in uniform. It gives him an air of authority, and in anything connected with the military establishment this is certainly desirable at the present time.

Doctor Smejkal has transmitted this suggestion to the Adjutant General of the State of Illinois, who has given the matter favorable consideration, and has promised to bring it to the attention of the military authorities in Washington, providing the idea finds endorsement in other boards.

Since many readers of *CLINICAL MEDICINE* are connected with exemption boards, we suggest that anyone who approves of this idea should take it up, either with the Adjutant General of the state in which he lives or with the Secretary of War.

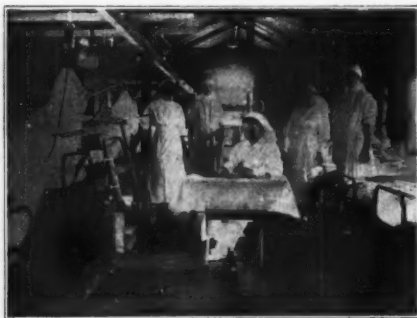
The idea seems to us good. Exemption board members are officers of the Army, serving as faithfully as, and in many instances with greater personal sacrifice than, some of those who proudly wear Uncle Sam's livery of honor.

PERFORMING BLOOD TRANS- FUSION AT THE FRONT

In an interesting letter written by Captain Henry L. Sanford, of Cleveland, and published in *The Cleveland Medical Journal* for November last, he describes the following interesting incident:

"A little incident occurred the other night which appealed to me as most symbolic of our part in this war. After severe wounds located near big blood-vessels, we often get, eight or ten days afterward, what we call secondary hemorrhages, this resulting from the fact that the vessel-wall, not punctured at first, becomes eroded from the incident suppuration; and then, suddenly, there occurs a big hemorrhage.

Recently, at about midnight, I got a hurry-call for just such a case and before I got there the chap was just about gone.



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Ward in a British Hospital in France.

So, we sent a call to the enlisted men's barracks for a volunteer to give his blood, and out of several one young fellow was selected. We transfused about a pint of blood

into the English Tommy, and now, of course, he is going to get well.

A lot of English officers were standing around watching proceedings, many of whom had never seen a transfusion done before. When the thing was over, they all went up to our enlisted man and shook him by the hand and thanked him. Our chap had been put in bed beside the one to whom he had given his blood, and was very calm about the whole thing. When all was over, one of the English surgeons, with big tears in his eyes, turned to me and said, 'By God, that chap of yours acted like a Briton!' Of course, I asked him how else he had expected the boy to act; secretly, though, I felt very proud of him. That our men should be saving English lives by giving their blood, seemed to me a very beautiful and tangible demonstration of America helping out.

The sequel to the story is, as I have said, that this Tommy is getting well. Our boy stayed in bed for forty-eight hours, to make a little new blood, and then went back to his duties. A most beautiful friendship has sprung up between these two men, and they call each other 'Brother'—as well they may."

MERRY CHRISTMAS!

Many readers of *CLINICAL MEDICINE* have enjoyed reading the articles by Lieutenant Murphy of the Medical Reserve



"When We Get a Package From Home."
Four Signal Corps Officers in Aviation Camp, Kelley Field, near San Antonio, Texas. The Rest Are Medical Officers.

Corps of the United States Army, telling of his experience in camp at Fort Riley, Kansas. At the present writing, Lieutenant Murphy is attached to the aviation camp at South San Antonio, Texas. It is more than

likely than by the time this reaches you he will be on his way to France.

Lieutenant Murphy has from time to time sent us some very interesting snapshots showing army scenes. A number of these have already appeared in *CLINICAL MEDICINE*. The picture reproduced on this page shows the boys as they appear when they get a Christmas package from home. Doctor



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British Surgeon Aiding German Wounded.

Murphy is the man sitting in the middle of the picture, with his knife poised over the pie. Murphy makes this inquiry—"Do we look as if we were afraid of the boche?"

THE SHRINKAGE OF POPULATION IN FRANCE

"Before the war," we learn from a pamphlet issued by the American Red Cross, "the birth rate and death rate in France were so nearly equal that publicists voiced their concern over the future of the national life. Last year, however, with the death rate probably over 200 per 1000, not counting deaths of men in military service, the birth rate was officially estimated at only 8 per 1000. In New York State, the birth rate is 23 or 24 per 1000, the death rate about 14 per 1000.

"The total of deaths in France, in 1916, was about 1,100,000. Births numbered only 312,000. The net loss in population was 788,000, or nearly 2 percent of the whole. In Paris, where 48,917 babies were born in the year ending August 1, 1914, only 26,179 were born in the second year of the war, ending August 1, 1916.

"There is urgent need for effective work among children, Major Murphy cabled. He reported that there was also special need

for doctors and nurses for work with mothers and children. The Red Cross, accordingly, organized and sent to France an infant-welfare unit, which has been reinforced, in response to urgent requests from Major Murphy, by two additional groups of doctors and nurses.

"These specialists are surveying the situation and studying the work already being done by the French. They are practicing

among the people, without receiving compensation from patients.

"The task before the Red Cross is not only to cooperate with French specialists, but, also, to conduct a general educational campaign among French mothers, in the interest of better prenatal hygiene and scientific feeding and care of the babies. Special efforts will be made to protect children from tuberculosis infection."

THE WAR'S RECOMPENSE

(The original of this verse was found on an Australian soldier who bravely fought and as nobly died. His name is as yet unknown.)

YE THAT have faith to look with
fearless eyes

Beyond the tragedy of a world at
strife,

And know that out of death and night
shall rise

The dawn of ampler life:
Rejoice, whatever anguish rend the
heart,

That God has given you a priceless
dower,
To live in these great times and have
your part

In Freedom's crowning hour.

That ye may tell your sons who see the
light

High in the Heavens—their heritage
to take—

"I saw the powers of Darkness put to
flight,

I saw the Morning break."

—From The Red Cross Magazine.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

(Continued from December issue, page 941)

SO in the "Sonnets from the Portuguese" we see the touch of an artist, an artist thrilled to her very depths by the love of her "most gracious singer of high poems." Such an outburst as this, which reveals with magnificent frankness the innermost secrets of an ardently loving woman's heart, is, in my opinion, unequalled in literature. Has there ever been written, in sonnet form or otherwise, anything finer than this:

How do I love thee? Let me count the ways

I love thee to the depth and breadth and height

My soul can reach, when feeling out of sight
For the ends of Being and Ideal Grace.

I love thee to the level of every day's

Most quiet need, by sun and candlelight.

I love thee freely, as men strive for Right;

I love thee purely, as they turn from Praise.

I love thee with the passion put to use

In my old griefs, and with my childhood's faith.

I love thee with a love I seemed to lose

With my lost saints—I love thee with the
breath,

Smiles, tears of all my life!—and, if God
choose,

I shall but love thee better after death.

Here is an exquisite expression of the holiest passion that can sway a human soul. The world knows the Browning's wedded life; all was gloriously fulfilled—so far as mortality permits, without a shadow, those rare twin-spirits standing in clear light, whose radiance, intensified by the glow of genius, shed grace and beauty upon men and bade them reverence the majesty of Love. After their marriage, the Brownings resided principally in Florence, at Casa Guidi, a home immortalized by Mrs. Browning's poems of that name. Their eldest child died and has been admitted into the starry galaxy of fame in some beautiful verses written by the mother. I have not much faith in the depth of a sorrow that resolves itself into dactyls and spondees, rather agreeing with Dryden that "great griefs are dumb." It is, however, perhaps

unjust to apply the common standard to such an intellect as that of Elizabeth Barrett Browning. The poem is too long to quote, but, it expresses her grief in her own peculiar method and commemorates a domestic event that must have deeply wrung the hearts of the two great poets.

Like her husband's, her style was very early formed, and some verses of hers written in her tenth year were published in the Athenæum and attracted great attention by their merit.

Mrs. Browning never wrote as anyone else did. Save in the "Sonnets from the Portuguese," her style, like that of her husband, was unattractive to most readers. It is this peculiar originality, amounting almost to the unnatural, that made her reputation among the poets, critics, scholars, and literati and renders her so distasteful to the millions. To understand her, it is necessary to have a certain amount of learning; to enjoy her, a cultivated taste is indispensable. To be sure, like all true poets, she has frequently recurring touches of nature and simplicity that appeal to every heart, but, it is regarded as classic by many people, and treated accordingly. Indeed, Mrs. Browning's yearnings, as well as her instincts and studies, were of the past and future, and not of the present. Much of her poetry dealt with the dead and with the depths of thought, rather than with the human heart; although, when she chose, no one could reach that truest seat of poetry easier than could she.

In her "Vision of Poets," there is a Miltonic weight very remarkable for a woman. Her description of a Hebrew angel ministering at an altar surrounded by the great bards of the time is very fine.

Mrs. Browning's most elaborate work is her "Aurora Leigh." It may be called an epic of the heart, as made visible by society. In it figure the artist, the poet, the high churchman, the pantheist, the woman of convention, the woman of fashion, the

seamstress, the mechanic, and the laborer; it also contains numerous descriptions of nature and scenery and embodies most beautiful imagery.

It is difficult for me to decide which of her poems please me most, outside of the sonnets. I quote two or three that especially appeal to me. Here is "The Prospect":

Methinks we do as fretful children do,
Leaning their faces on the window-pane,
To sigh the glass dim with their own
breath's stain

And shut the sky and landscape from their
view;

And thus, alas! since God, the maker, drew
A mystic separation 'twixt those twain—
The life beyond us and our souls in pain—
We miss the prospect we are called unto
By grief we are fools to use. Be still and
strong,

O man, my brother! hold thy sobbing breath
And keep thy soul's large window pure from
wrong;

That so, as life's appointment issueth,
Thy vision may be clear to watch along
The sunset consummation—lights of death.

How true is this: "The Best Thing in
the World":

What's the best thing in the world?
June rose by May-dew impearled;
Sweet south wind, that means the rain;
Truth, not cruel to a friend;
Pleasure, not in haste to end;
Beauty, not self-decked and curled
Till its pride is overplain;
Light, that never makes you wink;
Memory, that gives no pain;
Love, when so you're loved again?
What's the best thing in the world?
Something out of it, I think.

Consider this:

Nothing is small!

No lily-muffled hum of summer bee
But finds some coupling with the spinning
stars;

No pebble at your foot but proves a sphere;
Earth's crammed with Heaven
And every common bush afire with God;
But, only he who sees take off his shoes.

It has been well said that all of Mrs. Browning's work is buoyed up by her luxurious and overflowing imagination. With all its imperfections of technic, its lapses of taste and faults of expression, it always remains poetry, throbbing with passion and emotion and rich in color and sound.

Peter Bayne says of her in his "Great Englishwomen": In melodiousness and splendor of poetic gift, Mrs. Browning stands first among women. She may not have the knowledge of life, the insight into character, the comprehensiveness of some;

but, we must agree that a poet's far more essential qualities are hers; usefulness, fervor, a noble aspiration, and, above all, a tender, far-reaching nature, loving and beloved, and touching the hearts of her readers with some virtue from its depths. She seemed, even in her life, something of a spirit; and her view of life's sorrow and shame, of its hearty and eternal hope is something like that which one might imagine a spirit's to be."

I rather have given a personal sketch of these two great intellectual lights than an elaborate exposition of their genius, which every reader has in his power to form for himself. Of their originality, power, and fearlessness, there can be no doubt, since they appeal to everyone capable of soaring above the hackneyed thoughts, conventionalities, and unconventionalities of what, by courtesy, is called modern poetry, particularly that known as *vers libre*.

* * * *

The great prominence which is occupied at the present day by the "sex-need" and the unaccustomed attention which is paid to it in open forum is not anything new, in itself, however new it may appear to us. It marked, at once, the climax and the beginning decadence of all the old civilizations. It is as though, with the climax reached, with the greater ease and comforts of life, with the increased necessities that in former days were considered luxuries, and with all the manifold changes toward a wider outlook on life, the relations of man to woman received a readjustment; as if the mutual attraction had become more emphasized, having been held in check in former strenuous times by the necessity of work, of struggle against the forces of nature, against savages, animal as well as human, against the needs of the body. For, the "sex-need" is only partly a physical one; the more highly developed man becomes, mentally and physically, the more his sex-need is sublimated, the more he searches for the ideal in woman, even though physical, tangible, yielding woman is still—yes, all the more—necessary to him.

And, yet, it is not certain that this open question, with all secrecy ruthlessly swept aside, now being discussed, with all that we are accustomed to consider as decent reticence thrown to the winds, is desirable, and whether it makes for the benefit of the growing youth. Miss Repplier, some time

ago, in *The Atlantic Monthly*, struck a true note when she pleaded for greater reticence and questioned the propriety (I do not mean the term in the meaning of Mrs. Grundy!) of the present unrestrained sex-discussions.

It appears strange that the means that are being employed for bringing sex so much into the foreground are mostly originated by women themselves, and by that portion of women who are considered as beyond the pale of respectability. If our thoughts and our speech are more closely occupied with sex, if women and girls are more exposed to sex-advances from men, who formerly used to admire their charms at a distance, because they could only imagine, not see them—it is because, at least in part because, women, as a body, submit to the dictates of the women of the underworld and the half-world in their attire; because they expose to the unrestrained gaze of everybody and anybody, without hesitation and compunction, charms which they formerly reserved for their husbands and their lovers exclusively; because they have "developed" in their intercourse with men and have thrown off the shackles of their former more retired position.

While it must be granted that the animal sexual act is as natural as any other animal act, I deny that it is as necessary as the act of nutrition. Physicians should never have made that assertion. Pathological physiology proves that to be so, for, while man cannot live without his digestive organs, while life is supported only for weeks—at most, months—after the stomach, for instance, has been extirpated, man and woman can live very well, and in health, without their generative organs. Amputation of the testicles, of the ovaries, does not remove vital organs and is not incompatible with a continuation of life for many years afterward.

It may be granted that sometimes continence in women is less injurious than in men. Yet, even in men it is as much a matter of training and education as it is in women. There are men who are continent until their marriage and who do not suffer from it. Of course, it all depends upon the mental and moral (again, "moral" not in Mrs. Grundy's meaning) makeup, just as in the further assertion that "complete abstinence from love cannot be borne by women

through a long period of years without producing serious results on the body and the mind." It is all a matter of proportion; it is all relative. Even men and women who are not exactly frigid can pass through long periods of chastity, or, better, abstinence, with perfect health, provided they have a sufficient mastery over themselves to make their sex-needs subservient to their other needs. He who yields to his passions is not necessarily the strongest man, if by doing so he offends the dictates of decency, modesty and moral cleanliness. (I wish to insist that I use all these terms, not from a narrow viewpoint, but in their true meaning.)

"Many wives are sexless; they are bored at their prospective duties of propagation." *This is, in a great measure, the kernel of the problem.*

This is the most prominent problem, in the opinions of many, in all civilized nations today, for, the birth rate is constantly falling. It is also the solution of the problem of prostitution and of the lowered morality among the young people. The desire for no or few offspring has produced in our women an all too knowing facility for preventing conception. Women who might well bear children are too indolent, too lazy, too vain, too pleasure-loving to undergo the pains of wedlock; they desire only the pleasures; they refuse the duties, but insist upon all the privileges. And then they wonder that their husbands' love grows cold and that they are left for other women, who are, perhaps, less good looking, less physically attractive—who have the mental and the psychic qualities of appeasing, not so much the sex-hunger as the heart-hunger of the men.

Sex-need is a slogan that is being overdone. In the purely physical sense, it can be satisfied as easily as the full bladder is emptied of urine, and the merely physical satisfaction and sense of relief is no different. If a man is wanted by his wife only to relieve her sex-need to the extent of relieving the turgidity of the genitals, of giving vent to the passion, of lowering the pressure, as it were, his embraces will soon become less amorous and more merely perfunctory. With a lowered respect for his wife, there comes the diminished inhibition of yielding to attractions in other women. With the position which the wife takes who refuses to

bear children and to submit to the other duties of wedlock, while the husband must bear his full burden and, in consequence of his wives' vagaries, see his privileges and his pleasures curtailed by the precautions demanded by her, his attitude toward her necessarily undergoes a change, at first subtle, but gradually more and more insistent.

A man can not love and cannot respect his wife who desires only the privileges and refuses the duties of married life; soon he will compare her to the women who would supply him with these pleasures, and he will conclude that his wife is worse than they. For, they merely make their bodies the object of barter; they are, in most cases, just as decent, just as "nice," just as attractive, and often more so than so-called "good" women. Also, they are less censorious and less vindictive.

A woman who refuses to bear her share of the burden is worse than a mistress, because the latter gives up her good name to the man she loves; she gives herself, and is true to him as long as the mutual love lasts. The married mistress holds her victim in everlasting chains and makes his life a hell. She pretends to love him, and, yet, she refuses the seals and symbols of his love; she wants all of his love, all of his attention, and (and this is the main thing!) all of his money. But, she is not willing to reciprocate, she is not willing to give up.

Marriage is a matter of give and take, a question of privileges and duties. Truly, the husband gives, the wife does the taking; the husband has the duties, the wife the privileges. It's a lovely arrangement.

One of the writers on "Women and Morality" advocates open recognition of sexual partnerships outside of marriage in certain cases. This question is discussed in a novel ("The Healer," by Robert Herrick) that was reviewed in these pages a few years ago. This novel discusses the fate of the man, the wife, and the woman. The woman holds that the day will come when women will be permitted to bear the chil-

dren of the men they love, without losing caste, without giving up their respectability and their position in society; that the time will come when women, even though not married, will be allowed to have children, if they want them. I can understand that position. To many women the idea of having to live with a man all their lives is unbearable; they prefer to stifle their longing for children, they prefer a living death. I have known women, good women, who would have given their hope of salvation if only they could have had children. But, as for marriage—that is another matter. And I do not know that I blame such women much. Things usually have two sides. If man gets tired of the "partner of his joys," so does woman. And, why not? If married people only could learn that a vacation, a rest from each other would do them both good, life might be easier.

The problem of sex will not be solved by unrestrained discussion. Miss Repplier is right. Women lose by it; they lose a charm, a claim to respect, a something which characterized them and endeared them to man. Tacitus relates that the Germani of old looked upon woman as on something higher than man, and nowhere was woman held in such esteem as among our Germanic forebears. They were modest, yet, yielded to their husbands; they were retiring, yet, they aided them in danger; they were their husbands' partners in peace and in war; they shared their joys and pleasures, but, they also claimed their share in the dangers and troubles. *They were women!* Women of today who clamor for greater sex-expression, who would want all the pleasant things of life and, desire more knowledge in order to apply it for the prevention of the normal consequences of sex-need, are not women; they are not even females. They are—they cannot be designated.

I respect a woman more highly who wants to bear a child for the man she loves, even though she can not be married to him, than I do a married woman who refuses to do so.



Among the Books

BULKLEY: "CANCER"

Cancer: Its Cause and Treatment. By L. Duncan Bulkley, A.M., M.D. Volume II. New York: Paul B. Hoeber. 1917. Price \$1.50.

If the author is correct in looking at cancer as a general disease of which the local lesion (which ordinarily is removed surgically) is simply the result or product of a previous, perhaps long standing, blood- or nutritive disorder, it is readily understood why the simple excision of the tumor and the surrounding tissues cannot be expected to eradicate the malady permanently. For many years the accepted teaching with regard to cancer has been: Early operation. All the laboratory research that has been devoted to the elucidation of the cancer problem was utilized to the end of maintaining and supporting the insistence of surgeons upon early and "radical" removal, while the internists have accepted this decision of their surgical advisers. Yet, with all the laboratory work that has been done and despite the freedom with which surgery was permitted to remove cancerous growths, the mortality of cancer has increased by 28.7 percent in the fifteen years from 1910 to 1915. It is interesting to compare this evidence of failure on the part of laboratory research and surgical treatment in cancer with the favorable results as concerns tuberculous disease, the tuberculosis mortality having been lowered in the same period of time by 27.8 percent.

To the thinking man, these comparative figures speak loudly, the inference being, naturally, that the accepted treatment of cancer, and the position according to which cancer is purely a surgical disease, are woefully wrong. There are few men living today who have a larger clinical experience with cancer than has Doctor Bulkley, and the fact that he has for over thirty years persistently and insistently declared cancer to be a constitutional malady, associated with the failure of surgical treatment, should be sufficient to make us pause in our blind acceptance of the view that

limits the treatment of cancer to surgical measures.

In the present volume, which supplements an earlier book on the same subject by the author, cancer is studied carefully, while largely from the viewpoint of the clinician. Doctor Bulkley's results have shown the justice of his position, that cancer is a constitutional malady, and also the correctness of his claim that diet is of decided influence.

This book is essentially a book suitable for the practitioner. It will aid him to a better understanding of the causes and treatment of cancerous disease, and it may contribute toward diminishing the recklessness with which patients suspected of having cancer now are subjected to the knife, and then only too often to aggravation and generalizing of the malady, with rapid termination by death.

GLEY: "INTERNAL SECRETIONS"

The Internal Secretions: Their Physiology and Application to Pathology. By E. Gley, M. D. Translated from the French, and Edited, by Maurice Fishberg, M. D. New York: Paul B. Hoeber. 1917. Price \$2.00.

Here is a small and handy book that makes it possible to study the somewhat complicated problems connected with the subject of internal secretions, under the guidance of a scientist who has devoted much special attention to their elucidation. The study of the internal secretions, and the therapeutic indications deduced therefrom, are of comparatively recent origin. The available treatises are, frequently, too technical to attract the practitioner's attention, or, also, very often they fail by being unduly enthusiastic and optimistic in their practical application.

Doctor Gley has done a great service to physicians in relating dispassionately and critically what is actually known concerning these interesting organs and their vital products. While he warns against unjustified excessive optimism, he does not fall

into the other error of being ultraconservative; in short, he affords the possibility of one's formulating clear and sane conclusions concerning the actual merit of organo-therapeutic methods. Doctor Gley's book is distinctly and clearly valuable. Incidentally, it is of interest that the subject of internal secretions, of which he, a Frenchman, is an able exponent, was first brought to the attention of physicians by French physiologists.

THE PHYSICIAN'S VISITING-LIST

The Physician's Visiting List for 1918. Philadelphia: P. Blakiston's Son & Co. Price \$1.25 to \$2.50, according to style desired.

Blakiston's Physician's visiting-list is offered for the convenience of physicians for the sixty-seventh consecutive year. In addition to the actual visiting-list, there are the customary aids and guides: temperature chart, gestation chart; first aid reminders for poisoning, for drowning, dose list, and many others.

CARTER: "CLINICAL DIETETICS"

Nutrition and Clinical Dietetics. By Herbert S. Carter, M. A., M. D.; Paul E. Howe, M. A., Ph. D.; and Howard H. Mason, A. B., M. D. Philadelphia: Lea & Febiger. 1917. Price \$5.50.

In books dealing with dietetics, we are quite accustomed to finding the author's personal opinions and preferences laid down with an assumption of authority that recalls the title of the late Father Kneipp's book: "Thus Ye Shall Live (*So sollt ihr leben*). It seems as though the less is known of a subject, the more positively are opinions expressed.

It is a refreshing change to find in the preface of this book the acknowledgment of the authors that dietetics is far from being a mature science, and that a book founded entirely upon facts proved in the laboratory is as yet impossible. Nevertheless, it occurs to the Reviewer to doubt the desirability or even the ultimate possibility of an authoritative book founded entirely on facts proved in the laboratory; this for the reason that these facts would have to be proved largely for animals, while, where human beings are concerned, the tests could not very well be as inclusive as would

have to be the case to make possible definite and absolute conclusions. In this, as in all combinations concerning the human organism, we always are dealing with relative values; there is always at least one unknown factor—usually several of them.

However, in so far as "dietetics must be deduced in part from accurate knowledge of the chemistry of foods and of nutrition and in greater degree from a knowledge painfully acquired by previous experience in somewhat similar circumstances," it may safely be asserted that this treatise is sufficiently different from, as well as superior to, older works on the same subject to mark a notable improvement in the method of preparing a textbook on dietetics. The discussions of digestion, absorption, excretion, of energy requirements, protein requirements, and so on, are actually interesting, the authors having succeeded in presenting the somewhat dry subject-matter in a really attractive form. Part II deals with foods proper, while Part III is devoted to feeding in infancy and childhood. Finally, Part IV, comprising almost two-thirds of the entire volume, takes up the question of diet in the various diseases and conditions in which it is of importance. Altogether, the book by Doctor Carter and his associates was prepared with a great deal of patient care and painstaking, and it deserves heartiest commendation to the medical profession.

GRAVES: "MODERN DIETETICS"

Modern Dietetics: Feeding the Sick in Hospital and Home, with Studies on Feeding Well People. By Lulu Graves. St. Louis: The Modern Hospital Publishing Company. 1917. Price \$2.00.

Miss Graves' work on modern dietetics might justly claim recognition as a textbook on applied dietetics. It is an elaboration of a series of papers contributed to *The Modern Hospital*, with the intention to help the hospitals of this country solve some of the intricate problems of feeding the sick. Very justly, these papers attracted widespread interest and gave rise to the preparation of the present volume, which certainly contains an unusually valuable practical presentation of the subject.

In many instances, the author evidently speaks from bitter personal experiences when she insists upon the importance of

paying careful attention to the feeding of sick people. Also, she maintains, justly, that it is not sufficient to slam down before a patient a certain amount of foodstuffs that represent the needed caloric value; but, that these materials must be prepared in such a manner as to be pleasing to the palate and, indeed, to the patient's esthetic sense. At least that is true for many people, although, of course, others are quite satisfied with eating the same amount of stuff day in day out, year in year out.

Miss Graves' book gains by containing a large amount of practical suggestions and recipes that, so far as a "mere man" can judge, are easily followed. In short, it is to be hoped that this book will contribute toward developing recognition of the importance of dietetics, especially in hospitals, sanitariums, and similar institutions. Miss Graves quite properly points out that much has been sinned in this respect, and that thereby undoubtedly many patients have failed to receive as much benefit from their treatment as they otherwise might have experienced.

DRAPER: "ACUTE POLIOMYELITIS"

Acute Poliomyelitis. By George Draper, M. D. With 19 illustrations. Philadelphia: P. Blakiston's Son & Co. 1917. Price \$1.50.

The little volume before us discusses what is known at the present time concerning the etiology, epidemiology, pathology, and symptomatology of acute anterior poliomyelitis, or infantile paralysis—both of which names, however, as the author properly points out, are incorrect, although so thoroughly established as to render their changing difficult.

It is proper to say that Doctor Draper is eminently qualified to write such a book, he having participated in the Rockefeller Hospital in the intensive studies of the disease during the great epidemic of 1916, while also having been a part author of the monograph on the subject issued by the Rockefeller Institute for Medical Research. The book may be accepted as a practical guide to the diagnosis, care, and specific treatment of epidemic poliomyelitis.

In the history outlined in the first chapter, attention is called to the fact that such definite knowledge as we may possess on infantile paralysis is of recent

origin. While isolated descriptions were published as early as 1774, 1835, 1840—the latest by von Heine—it was only in 1884 that Struempell suggested, as the first, the probable infectious nature of the malady. To Medin, however (1890), belongs the credit of placing the disease definitely in the class of those which occur as epidemics. The modern conception of the disease was developed with Wickman's detailed study of the epidemic in Sweden occurring in 1905. After that, much work was done, and it is a matter of history that exceedingly valuable contributions originated in the Rockefeller Institute.

Doctor Draper's description of the etiology, pathology, symptoms, and diagnosis of acute poliomyelitis should be studied carefully, the chapters on these topics containing an excellent résumé of what is known. With regard to the treatment, the method of immunization by means of immune-serum is fully described, while for the later treatment, that of managing the early hours of paralysis, and of muscle training, reference is made to the book by Dr. R. W. Lovett, on the after-care of poliomyelitis (reviewed in these pages in 1916, page 883).

It is of interest that in the treatment of the earliest stage of the disease the author questions, at least by implication, the advisability of employing powerful antiseptic applications to the upper respiratory passages, for, now that we have learned (p. 85) that the nasal secretions themselves are destructive of the virus, we should aim to conserve this natural agency. Whether the action of this secretion is best promoted by noninterference or by the gentle impetus to increased secretion afforded by bland saline and alkaline fluids, may still be regarded as an open question.

Doctor Draper's little book will be found of distinct service to the practitioner.

RUHRAEH AND MAYER: "POLIOMYELITIS"

Poliomyelitis in All Its Aspects. By John Ruhraeh, M. D., and Erwin E. Mayer, M. D. Illustrated with 118 engravings and 2 plates. Philadelphia: Lea & Febiger. 1917. Price \$3.25.

This treatise on poliomyelitis is somewhat more complete than the one noticed

immediately preceding, in that it considers the question of treatment more fully, while in the other chapters there also are discussed the epidemiology of paralysis, the symptoms, and so forth. Indeed, much valuable information has been collected in its pages that is of the greatest importance to the physician who desires to familiarize himself with infantile paralysis.

In the matter of treatment, the authors are very conservative. At the same time, they suggest various remedies that have been employed with satisfactory results in certain cases. Thus, for the pain of the early stage, they recommend codeine in combination with antipyrin. They also employ iron and arsenic as tonics, and some of the bitter drugs, with small amounts of alcohol, for the loss of appetite. Digitalis is held to be the best heart stimulant. However, the authors very justly are against indiscriminate drugging and do not believe that much can be accomplished by the use of medicine, except when prescribed with the greatest skill and judgment.

As to serum-treatment, the assertion is made that it is exceedingly difficult or even impossible at the present time to estimate the favorable results obtained by means of immune-serum. The entire subject calls for much further study, while, if the serum is used, its preparation should be undertaken only by one skilled in laboratory technic and be administered by one thoroughly familiar with lumbar puncture.

In their discussion of the orthopedic treatment of muscle training, the authors acknowledge their obligation to Miss W. G. Wright of Dr. R. W. Lovett's clinic, whose pamphlet on this subject was reviewed in this department (1917, April, p. 324). Altogether, Ruhrach and Mayer's treatise on poliomyelitis may be accepted as a standard textbook on the subject.

MEDICAL WAR MANUALS

Notes for Army Medical Officers. By Lt.-Col. T. H. Goodwin, R. A. M. C. With an Introductory Note by Surg.-Gen. William C. Gorgas, U. S. A. Illustrated. Philadelphia: Lea & Febiger. 1917. Price, \$1.00.

This is No. 2 of the medical war-manuals authorized by the Secretary of War and published under the supervision of the Surgeon General and the Council of National Defense. The text is based upon a series of lectures delivered at

the Army Medical School in Washington. It contains outlines of organization and administration, war surgery, sanitation in war, and general notes for service on the western front. The fact that the author possesses a long practical experience in actual war service, and, particularly during the present war, with its many new developments and requirements, makes this manual especially valuable for our medical officers. It goes without saying that all medical men who are interested in military medicine, either directly or indirectly, will wish to possess this as well as all the other volumes of the series.

"NOSTRUMS FOR KIDNEY DISEASES AND DIABETES"

This latest pamphlet issued by the Propaganda Department of *The Journal of the American Medical Association* (American Medical Association, 535 North Dearborn Street, Chicago. Price, 10 cents.) as a part of its work in disclosing facts regarding the nostrum-evil and quackery, is announced for the purpose of once more calling the attention of our readers to the splendid work being done in this direction by *The Journal*. The investigation of, and collecting data concerning, the various nostrums and quack remedies that are used for the purpose of abstracting hard-earned dollars from the pockets of usually poor people constitutes an activity on the part of the American Medical Association that certainly has ample justification in its own behalf. Ever since Samuel Hopkins Adams published his disclosures (in *Collier's*) concerning "the Great American Fraud," the American Medical Association has followed up this work with so much success that the nostrum-evil, without a doubt, has been considerably abated. Nevertheless, much remains to be done, and this work is deserving of the cordial and wholehearted support of every physician.

The pamphlets issued by The Propaganda Department should be ordered in quantities by practicing physicians and placed on the office-table or in the hands of the patrons, because the futility of attempting to treat serious organic diseases by means of so-called medicines, that are put up in such an irresponsible manner as are the nostrums and patent medicines, is there

so forcibly pointed out. It is this nostrum-evil that has in part been responsible for the reaction against drug-treatment in general, and has caused many people to lose all faith in such treatment as even a trained physician may prescribe; with the result that many people neglect to consult a doctor or to obey his directions at a time when their health might yet be restored by suitable therapeutic methods, whether by means of drug-treatment or a dietetic or general régime.

One may not always agree in everything with the dicta of *The Propaganda*; but, that does not alter the fact that its work is meritorious in a high degree, and that it is deserving of our wholehearted support.

MACKENZIE: "HEART AFFECTIONS"

Principles of Diagnosis and Treatment in Heart Affections. By Sir James Mackenzie, M. D., F. R. S. London: Henry Frowde, Oxford University Press, 1916. Price \$2.50.

We like this book of Sir James Mackenzie's, "*The Principles of Diagnosis and Treatment in Heart Affections.*" First, because it is a real book, and not a compilation—he has put in a quarter-century of scientific investigation and gathered clinical experience preparing himself for it. Next, we like it; because he takes the same view that we have so earnestly advocated; namely, that, after making full use of the opportunities afforded by laboratory and hospital, the most that can be said in their favor is, that they are useful as preparatory steps, but, that the real work must be done in the sick-room. And this must be done by the king of specialists (our own words), the general practitioner. Finally, we must express our appreciation of the thoroughness of the study and the masterly manner in which the work is conducted.

We might fill pages with illustrations exemplifying our reasons for this endorsement; instances of the insight afforded by the observations of a qualified clinician. Take these: "The investigation of the early stages of disease has not yet been seriously undertaken." "The patient's sensations must be studied while they are pres-

ent, and all associated phenomena carefully noted." "When heart failure sets in, the earliest manifestation is always a subjective sensation of a disagreeable kind." "Symptoms are produced in three different ways, according as they modify the structure of an organ or its functions, or call into play its protective mechanism."

It has not been so very long when we doctors dismissed a complaint with the slighting remark that it was "merely functional"; and this term was almost synonymous, in our minds, with "imaginary" or "hysterical." It is a striking evidence of the progress we are making that abnormalities of function are now being recognized as significant phenomena.

Passing reluctantly over many attractive chapters, let us quote some passages from the one treating of auricular fibrillation:

"The recognition of auricular fibrillation opens up a new era in the study of affections of the heart. . . . For the due appreciation of auricular fibrillation, the watching of individual cases for many years is necessary. . . . The onset of heart failure by 'back pressure' is shown by the recognition of auricular fibrillation to be misleading. . . . The recognition of how auricular fibrillation embarrasses the heart in its work will bring before you the essentials in prognosis and treatment. . . . The reasons for the beneficial effects of the digitalis-group of drugs can now be explained. . . . The discovery of auricular fibrillation was the outcome of a long and patient research. . . . Auricular fibrillation is usually persistent, and the heart may act for indefinite periods. . . . In the great majority of cases with heart failure and dropsy, the onset of heart failure is due to auricular fibrillation. . . . The patient is frequently conscious of the onset of auricular fibrillation, and the sensation is usually characteristic. . . . The rhythm of the heart in auricular fibrillation is of a disorderly kind. . . . When there are murmurs due to mitral or tricuspid stenosis, the presystolic murmurs due to auricular systole disappear with the onset of auricular fibrillation, while the diastolic remain. . . . The onset of auricular fibrillation is usually accompanied by signs of heart failure. . . . The prognosis in auricular fibrillation depends upon the condition of the heart-muscle and its power to maintain an

efficient circulation." And so we might go on quoting.

The application of digitalis, its exceeding value in appropriate cases and its non-action when not truly indicated, are laid down with a precision impossible before the recent studies of the heart had been made. The present writer could not detect the asserted differences between the action of digitalis and that of *strophanthus*, so far as heart action was concerned. Curiously enough, Mackenzie here classifies *cactus grandiflorus* with this group. Hypodermic injections of digitalin and of *strophanthus* he found without effect, for the reason that they were not absorbed.

The author treats of the nitrites and he mentions the bromides as being sedative, but, he seems to be totally ignorant of the existence of the powerful vasorelaxants aconitine, veratrine, and gelseminine. In this, he is not alone, to our regret. The day surely is past when a good word for such remedies would expose one to the suspicion of favoring irregular sects.

W. F. W.

MUNRO: "SUGGESTIVE THERAPEUTICS"

Handbook of Suggestive Therapeutics, Applied Hypnotism, and Psychic Science: A Manual of Practical Psychotherapy, Designed Especially for the Practitioner of Medicine, Surgery, and Dentistry. By Henry S. Munro, M. D. Fourth edition, revised and enlarged. Saint Louis: The C. V. Mosby Company, 1917. Price \$5.00.

The fact that a fourth edition of Munro's work was called for less than ten years after the publication of the first one was brought out, bears witness to the timeliness and need of a treatise of this kind for the general practitioner, and it likewise demonstrates the appreciation felt for the book itself. While the first version was somewhat tentative, each succeeding edition was subjected to careful revision, improvement, and greater completeness; yet, the author never lost sight of his first, and primary, aim, namely, to furnish a guide for psychotherapy that should be suitable for practical application on the everyday problems of the physician and surgeon.

This, the latest edition, contains a chapter on suggestion in dentistry, and also one on the human libido. The latter, the author

avert, has, in its preparation, enabled him to understand the great problems of humanity and to live closer to his fellows than he otherwise could have done, as well as to give the most efficient service. This desirable result bids fair to follow a close study of this chapter, as, indeed, will the study of the entire book. For, is it not a fact that we benefit, on our own part, from the advice and good that we are able to extend to our patients? In medical practice, as elsewhere, our actions not only are potentially of the widest possible centrifugal bearing, but, they also are retroactive, influencing our own selves, thus being, as it were, like chickens coming home to roost.

Regarding Freud's psychoanalysis, Doctor Munro is not altogether enthusiastic, for all that Freud's views in many points, coincide with his own. He discusses Freud's theories at some detail and comments upon them in a manner that will prove acceptable to the general practitioner. Here, as all through the book, the author's constant endeavor is manifest, namely, to help the practitioner to procure for himself, from the great mass of psychotherapeutic knowledge, the useful and practical, as applied in the treatment of all classes of patients coming under the domain of the general practice of medicine. Doctor Munro's book deserves great credit and increasing popularity.

BURNHAM: "FIRST AID"

A Textbook of First Aid and Emergency Treatment. By A. C. Burnham, M. D. Illustrated with 160 engravings and 2 plates. Philadelphia: Lea & Febiger, 1917. Price \$2.00.

While this little book is intended to train the volunteer assistant so that he may be able in an emergency to apply the principles of first aid, the requirements of the student have also been kept in mind in its preparation. The little book is serviceable for instructions of Red Cross workers and of those who may be called upon to give first aid to the injured in industrial establishments, also in railroad and other accidents. The treatment of the subjects is as simple as possible and the instruction given is excellent. This book can safely be recommended for the use of lay people, but, physicians also will find it of service for quick reference.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6348.—"Friedreich's Ataxia?" R. O. W., Tennessee, sends for examination a specimen of urine, together with the following case-history, and requests suggestions:

About four months ago, the mother of a well developed 3-year-old girl noticed that the child's knees would "seem to give way" and the child would fall; sometimes only one leg would "give way." The doctor could find nothing wrong objectively, but, on watching a few minutes, a relaxation of some of the muscles of one or both legs could be observed. Usually the child would catch herself and not fall, although quite often she did fall. There is no history of any nervous or mental trouble or other disease. The mother is a healthy woman; the husband is a farmer. The Doctor continues:

"About three months ago, I put her on washed sulphur, gr. 1-32; strychnine arsenate, gr. 1-128; podophyllin, ga. 1-64; collinsonin, gr. 1-128; berberine hydrochloride, gr. 1-28, to keep the bowels open. I also gave her strychnine arsenate, gr. 1-128; iron arsenate, gr. 1-32; manganese phosphate, gr. 1-32; zinc phosphide, gr. 1-32, three times a day. She became nearly entirely free from the spells; however, having been without the tonic for some time, the child lately was taken with diarrhea (for about a week when brought to me again) and the 'spells' became as bad as ever. She passes one pint of urine daily. She does not lose consciousness, froth or bite; the muscles do not contract, but, rather, relax."

The laboratory report discloses the presence of cystitis and marked disturbance of the body-chemistry. Traces of albumin and sugar are present, also indican and skatol. There is considerable pus, squa-

mous epithelium, some mucin, red blood-corpuses, very many colon-bacilli, and a moderate amount of calcium-oxalate crystals.

Had you not stated that the child occasionally falls and that there seems to occur a relaxation of the muscles of the legs, we should have considered this a simple case of autotoxemia and cystitis. The symptoms you describe, however, may be grave, foreshadowing the oncoming of Friedreich's ataxia. Still, the fact that the child became very much better upon receiving the sulphur laxative granules leads us to believe that thorough elimination, careful attention to the diet, and the administration of coli-bacterins possibly may prove curative. Nevertheless, a guarded prognosis should be given and the parents impressed with the necessity of having the child kept under observation for several months.

On general principles, we would suggest giving the child nuclein with the tonic formula, besides arbutin, 1-2 grain, and hexamethylenamine, 1 grain, to be given three times daily. Coli-bacterin should be administered every fourth or fifth day, and its dose gradually increased.

Investigate carefully how this child is being managed. Be sure that she receives no indigestible food, and only a minimum amount of candy or other sweets. Besides, it might be a good idea to massage the legs gently every third or fourth day; also, the application of a mild faradic current to the spine could do no harm and might prove beneficial.

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QUERY 6349.—"Nævus, Epithelioma, Seborrhæa capitis." J. A. N., Mississippi, writes: "What do you advise for removing warts, nævi, etcetera; also, what to cure

rodent ulcer, epithelioma of face, dandruff, etcetera?"

Sodium ethylate will remove small warts and superficial cutaneous blemishes, but, some large *nævi* are liable to prove stubborn. There are three satisfactory methods of removal, namely: pressure, electrolysis, and puncturing with a needle or sharpened stick moistened with nitric acid. In many cases, but very slight impetus is needed to start the process of involution. Occasionally a single application of a weak solution of salicylic acid in collodion will cause desquamation and disappearance of the stain. Or, repeated thick paintings with plain collodion, continued for some days or even weeks, will prove effective in some cases.

If obstinate, the pressure-method may be combined with discrete puncturing. That is to say, with an ordinary or a three-edged needle, slightly break up the tissues within and then, with due aseptic precaution, immediately apply the collodion. Such local disturbance gives rise, when pressure is continuously exerted, to more or less plastic exudation and agglutination and gradual obliteration of the growth.

In basal-cell epithelioma, excellent results may follow radium-therapy or the use of the Roentgen-rays. In very many cases, surgical procedure will prove most satisfactory, while, in a limited number of cases, the application of caustics may be tried. Naturally, there is much difference of opinion between the dermatologist and the surgeon, but, much depends upon whether the lesion is superficial, deep-seated or papillomatous.

Always the object to be kept in view is, the thorough destruction or removal of the epithelial tissue. Stelwagon states that relatively superficial circumscribed lesions probably do better under caustic treatment, while in the papillomatous varieties surgical measures should always be advised, particularly if the lesion is seated upon parts of loose and soft texture; and, if the neighboring glands are at all implicated, these should also be extirpated. Not infrequently, the area may be thoroughly curetted, and then a 50-percent solution of zinc chloride applied or else momentary cauterization with caustic potassa be done. Some dermatologists prefer the application of a pyrogallol salve several days. The present writer has often used, with excellent results, Marsden's paste, of which the fol-

lowing is the formula and the manner of using recommended by him:

Mix arsenous acid, 1 dram; powdered acacia, 1 dram; cocaine hydrochloride, 2 grains; then, with a small quantity of water, rub to a cream.

Curette the growth thoroughly and apply the paste on a piece of rubber plaster, after oozing has ceased. Leave in place for from eighteen to thirty-six hours. It may be necessary to make another application. Occasionally morphine (hypodermically) must be given to control excessive pain. Upon removing the plaster, you will find a black eschar surrounded by an inflamed area. Apply hot poultices until this slough comes away, then dress as any other clean wound.

It is unquestionably desirable in all cases to administer arsenic in some form, sodium cacodylate of late having been so employed, with excellent results.

For dandruff, we would suggest thorough cleansing of the scalp with carbenzol or some similar soap and hot water. In severe cases, it may be advisable first to massage the scalp thoroughly with warm water, to which has been added borax—2 teaspoonfuls to the quart. After the soap has been rubbed in, the head should be well rinsed and the scalp massaged with a small quantity of chlorazene cream. This is the most modern and, we believe, most effective treatment. The numerous older, accepted procedures may be found described in any standard work on diseases of the skin.

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QUERY 6350.—"Articular Ostitis." L. C., South Dakota, asks help in the case of a 16-year-old girl, the oldest of eight—all healthy and rugged, and the family-history good. She never had any injury. However, three or four times from the time she was a small girl up to the present attack she has had "spells of lameness" in her left hip, which would pass off in a few days, when apparently she would be all right again. Then, two years before seen by our correspondent, she gradually became so lame in the left hip that she was not able to walk at all, except with the aid of crutches.

When examined some months ago, a good deal of tenderness upon pressure existed over the left great trochanter; there also was pain in the hip-joint upon pressing the foot toward the body. The pain of which

she complained most, however, was located about three inches above the knee, upon the outer and anterior aspect of the thigh. She had been treated during the preceding two years by several different doctors, without any benefit.

"Under calcium iodide, 1 grain, three times a day, she showed marked improvement within a month. Her color improved and she felt better. Later, hot-air treatments were given, but, for two or three months these had to be omitted, as she could not get to the office. Except for that period, the treatment was continuous. She is now able to get around the house without crutches and without pain. There is, however, a hitch to the walk, and crutches are being used outside. There is slight pain or, rather, tenderness upon deep pressure over the trochanter; none upon pressure on the foot. Flexing the leg upon the thigh and attempting to flex the thigh upon the body gives pain in the knee. There seems to be some shortening of the left leg, and the left thigh is $\frac{3}{4}$ inch less in circumference."

Your patient presents the second stage of articular osteitis—hip-joint disease.

In the third stage, there is very marked deformity, which is the result of muscular contraction after absorption of the head of the femur and destruction of the ligaments. The position of the limb resembles that present in dislocation upon the dorsum of the ilium, namely, the thigh is strongly flexed, adducted, and rotated inward, and the foot inverted. There is, moreover, shortening of from 1 to 4 inches. Such displacement usually comes on gradually, but, sometimes is so sudden that it may be mistaken for a true dislocation. There is, of course, marked atrophy of all the muscles of the leg, and a difference in length, of several inches, may exist between the thigh of the affected leg and its fellow.

In the second stage, which has been called the stage of arthritis, the leg usually takes the position of permanent deformity, which is due to muscular action, not to destructive bone changes. At any time, an acute exacerbation may occur, indicated by increased pain, excessive tenderness, and inability to bear the slightest weight upon the limb. If articular abscesses form, the muscular spasm becomes so great that no motion whatever of the joint can be effected. The duration of this stage is very

indefinite, usually, though, lasting from a few months to a year or more.

Now and again, the disease is arrested in the second stage, and very occasionally it does not pass beyond the first. Here, unfortunately, the symptoms may be considered trivial, until they have continued for weeks or even months.

As a rule, there first is some lameness and stiffness of the joints. Not at all infrequently, this is observed only in the morning and wears off during the day. A little later, pain is complained of that is most frequently referred to the front of the knee or the inner aspect of the thigh, very rarely to the hip itself. The pain gradually increases in frequency and severity, and after a time begins to start during the night, produced by a sudden spasm of the muscles during sleep. Now the lameness becomes a constant symptom and week by week increases in severity. It must be borne in mind that all these symptoms may set in a very short time and, then, also, they come and go in the most inexplicable manner during a period of months or even two or three years before they are fully developed.

Your patient should be examined by a thoroughly experienced orthopedist. It must be remembered that, when the disease has advanced to the second stage, there always results impairment of the joint function, with decided lameness and muscular atrophy; although, provided the limb has been kept in the proper position, there will probably be very little shortening or deformity.

It is essential, of course, that rest be secured, by means of extension, by immobilizing the joint and by transferring the weight of the body, in walking, from the hip to the perineum. Such indications are now met, while the patient is up and about, by the use of appropriate apparatus.

When the disease has advanced to the third stage, especially after prolonged suppuration, excision is recommended. Indications for constitutional treatment are distinct. The patient should be given some such tonic preparation as the triple arsenates, preferably with nuclein. Codliver-oil also will prove beneficial.

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QUERY 6351.—"Acromegaly." R. C. K., New York, has under observation a pronounced case of acromegaly and asks for

suggestions regarding treatment of this condition.

At the present time, acromegaly is regarded as a disease characterized by the gradual enlargement of the acral¹ parts (nose, lips, tongue, lower jaw, hands, feet) and by hyperplastic alterations in the entire osseous system. In nearly every case the hypophysis becomes appreciably enlarged, this leading to broadening of the sella turcica. Associated with this there is a localization of corresponding symptoms of brain pressure. Not at all infrequently marked alterations of the thyroid gland and accentuation of the function of the interstitial glands are observed, together with loss of function (after an initial transitory increase) of the genital glands, and, some observers assert, hyperplasia of the suprarenal cortex. The pathological anatomical finding in the hypophysis is adenoma or adenocarcinoma of the anterior lobe.

Until lately, every method of treatment tried has proven ineffective; however, very striking results have followed the resection of the hypophysial tumor. Also retrogression of symptoms, especially those of cerebral pressure, with marked improvement in the visual disturbances, have been obtained by means of the x-ray.

Results can be expected from thyroid-gland feeding only in cases complicated with myxedema.

This entire subject is discussed at length in Falta and Meyers' "The Ductless Glandular Diseases," published by Blakiston, and we believe you will find it well worth your while to procure this volume.

QUERY 6352.—"Actinomycosis." A. C. R. Oregon, is treating a woman, forty-five years old, suffering from facial actinomycosis of ten years' standing. He wishes to know whether potassium iodide is the only useful remedy.

We regret to fully confess that we do not know of any remedy of real value for this infection, especially when the disease has lasted several years. As you are aware, potassium iodide proves efficacious in some cases, and, again, has failed utterly. Recently, the use of the x-ray has been recommended; also a few clinicians have reported good results from local injections of a 1 per cent solution of potassium iodide

and sodium iodide. It is barely possible that the iodides administered internally, in connection with injections of sodium cacodylate, might prove useful. Where there is associated staphylococcus or colon-bacillus infection, the administration of an autogenous bacterin might be tried.

QUERY 6353.—"Typhoid and Paratyphoid Fevers." F. J. L., New Jersey, asks for all the recent literature we may have on typhoid and paratyphoid fevers. We regret that we are unable to supply the desired literature. If you have access to a file of CLINICAL MEDICINE, note particularly the article on page 759 of the September, 1916, issue; also the answer to the query on typho- and typhoid-prophylactic bacterins, on page 469, May, 1916.

Besides the typhoid-bacillus, there are other related organisms which cause their own special disorders. Among these, the paratyphoid bacillus stands prominent. It causes a febrile disease very closely resembling typhoid fever, both in its symptoms and its course; in fact, the differential diagnosis from typhoid fever can be settled only by an examination of the blood, which reveals the presence of the paratyphoid bacillus. This organism presents characteristic differences in culture-media from Eberth's bacillus, while clinically the fever which it occasions differs from typhoid fever in running a much shorter course, frequently from ten to fourteen days. The symptoms are much milder than those observed in uncomplicated typhoid fever, the incubation being brief and the attack abrupt; the latter usually beginning with malaise, dulness, apathy, severe headache, diarrhea at first, followed by mild constipation, and fever that rises rapidly to 104° F. The course is irregular, ending either by lysis or by crisis, with short convalescence. Relapses are rare, but, complications common.

The prognosis is better than that of true typhoid fever and very seldom has a recognized case proved fatal; however, the diagnosis is often somewhat difficult, because some cases are probably multiple, the Widal reaction showing the presence of typhoid infection, examination of the blood, feces, and urine, however, disclosing the presence of the paratyphoid bacillus, also. The treatment is that of typhoid fever proper.

¹Greek: *Akros*-topmost, extreme.